FARM AND FIRESIDE.

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A FARMER'S OUTING

BY H. A. CRAFTS

AS FAR as leisure is concerned, the Colorado farmer is a favored mortal. Excepting in the matter of moisture Nature has been kind to him. Of sunshine and fair weather he has an abundance, so that he is seldom hindered in his work by inclement weather. Nor is he obliged, in the preparation of his land, to clear away forests, grubs and stumps, pick up stones or drain his acres. The land is bare, level or rolling, and save along the river bottoms is dry, too dry, in fact, so he is compelled to undergo the labors of irrigation as a sort of providential counterbalance for his manifold blessings. His seasons of seed-time and harvest also afford him ample time to do everything in a thorough manner, without being in a hurry about it, either. Some years he begins to sow his wheat in February, and the Christmas holidays may find him threshing it out from a big row of stacks in his field corner under the genial rays of winter sunshine.

These being the conditions it is reasonable to suppose that he has many spare moments for recreation; and he does have, even during the busiest season of the year—the summer-time. From early plowing time up to the middle of July he must apply himself assiduously to the labors of the farm; for there is the plowing, the sowing, and what is most important of all, irrigation to be done. His crops as a general thing come up without the aid of artificial moisture, but as soon as they get a good stand there are two reasons why he should lose no time in getting the water over them. First, the crops need it; second, the waters are pouring down from the mountains from the melting snows; the great main canals are running bankful, and unless every drop of water is utilized it may run past and be lost forever. But even as busy as he is he spares time from his home duties to attend Memorial day exercises and Fourth of July celebration in town, taking along, of course, his wife and little ones.

Sometimes between the middle of July and the first of September he finds time, a week or two, to take an outing in the mountains. He not only feels the need of a relaxation from the labors and cares of the farm, but daily he has looked perhaps a hundred times upon the giant range that lies over against the western sky, sleeping serenely in a flood of sunlight, and he yearns for a whiff of mountain air and the sound of falling waters. Mayhap the season has been hot and dry, and the surface of his plowed fields have become like beds of dry ashes, and the dust has blown across the plains in clouds, and there is an acrid smell of alkali in the air, and the flying sand has found lodgment between his teeth and grits uncomfortably as he chews the cud of discontent. The good housewife, too, looks longingly upon the gleaming hills and sighs deeply as she goes the daily rounds of the household, and the children have the infection and recount at the breakfast-table the joys of last year's vacation.

So, when all the thirty acres have been watered, and the crops are growing finely; when the second crop of alfalfa, perchance, has been put safely in stack, the ancient wagon-bows and canvas cover of the capacious farm wagon are unearthed from the outlying shed, where they have been gathering dust and cobwebs for a whole year; the rusty camp-stove is brought forth from the same general repository, and a busy stir of preparation goes forward, until all is ready for the start. Bedding, provisions and cooking utensils have been stowed in the wagon. The tent-poles have been thrust through various lengths of stove-pipe and slung to the sideboards. At the rear end of the wagon a large dry-goods box has been transformed into a sort of rustic buffet wherein has been stowed, in proper compartments, various ingredients necessary to the culinary art; and a tin bucket has been slung beneath the hind axle, wherewith to draw water for a thirsty team and general camp purposes. At early dawn on the morning of departure, when everything has been made snug, two sturdy farm-horses are put to the wagon; the favorite milk-cow is tied to the rear, and a crate of live chickens from the poultry-yard is lashed to the top, so that the family during its journey may not be deprived of any of the luxuries of farm-life.

TENTING IN THE COLORADO FOOT-HILLS

An early breakfast is eaten, and soon after the sun has risen above the eastern plains and casts its rosy beams upon the purple hills the start is made. There is no hurry, because it is an excursion for leisure and rest. The morning is cool, and a refreshing breeze sweeps down from the mountains, rippling across the fields of grain by the wayside. The team jogs along the dusty highway at its own sweet will; the reluctant cow pulls back upon her leading-string as she leaves her companions and her familiar pastures; the family dog trots contentedly beneath the wagon, but among the children, who are perched upon the top of the loaded wagon, there is a constant chatter of tongues and a ripple of laughter. Every object along the roadside, however simple, is a matter of interest and a subject of youthful comment. The elders are content to escape from the cares and toils of the farm, and to witness the childish delights of their offsprings.

If the excursionists do not live too far from the mountains they arrive just inside of the foot-hills about noon, and in some shaded nook near the highway, beside a running brook or bubbling spring, they pause for the noonday meal. The horses are taken from the wagon, the harness taken off, the animals watered and picketed out to graze. The cow is watered from the bucket, and also tethered out to graze. For the first meal or two food has been prepared beforehand, so there is little to do except to spread the meal upon some convenient piece of sward. But there is the coffee to make, and to do this a small arch of loose boulders is built, and a fire built beneath from dry pine faggots that are gathered near. Soon the coffee-pot, black from many previous outings, is sending forth jets of aromatic vapor mingling with the resinous smell of burning pitch-pine. Water is drawn from the spring or rivulet, and when all is ready young and old fall to with a zest begotten of a new and freer life. And when the promptings of hunger have been satisfied, and the dishes put to rights, there is no hurried departure, but a spell of luxurious leisure is enjoyed. Father draws forth his tobacco-pipe, stretches himself beneath the shade of some overhanging tree, and gazes afar off upon the shimmering hills through clouds of curling smoke, forgetting for the time being all his cares and perplexities. And to the tired mother, what a surcease of narrow and monotonous drudgery! She is no longer bemmed about by pressing duties nor petty cares. The tired nerves are relaxed and the anxious brow unbends. The warm sunshine banishes a multitude of aches and pains, and seems to enter the very soul, and the life-giving ether thrills the senses like draughts of wine. And the children hie away to the hillsides, in search of wild flowers, rare stones, crystals and a thousand trifles filched from the bounteous storehouse of Nature. How pleasantly their musical laughter echoes across the glades, falling upon paternal ears with infinite sweetness.

And shall the dream be broken? No! Let the world wag as it will; it is afar off, and is a troubled sphere that has been cast aside. A soft languor falls upon the senses, and physical effort is contemplated with aversion. It is like the power of lotus-flowers. There is no duty nor incentive of any kind to draw them on; so the long afternoon wears dreamily on, until the sun dips behind the mountain crests, and a shadow is cast across the valleys. Even the old cow is filled with contentment, for she has grazed until she can graze no longer, and is lying down upon the warm sod chewing her cud with an air of supreme satisfaction. The horses still crop the grass within the narrow radius of their picket-ropes, while the faithful dog, ever mindful of the safety of the younger members of the family, is scouring the hills with the children, making occasional savage assaults upon the native haunts of gophers or jack-rabbits.

At last the day departs in a blaze of glory, and dusk steals gently through the long valleys. The air turns suddenly cooler, and the day-dreams are at an end. The children have returned laden with trophies and there is a stir in camp. The tent is unloaded and pitched upon a level stretch of ground, and while the farmer's wife prepares supper at the glowing camp-stove, the children gather armfuls of grass and sage-brush with which to soften the beds, which must be made upon the uneven surface of the ground. The preparation of the evening meal is a matter of more than usual interest, especially to the children. The small boys persist in stuffing the camp-stove with fresh fuel, until the draft fairly roars, the sides become red-hot, and the pipe pours forth dense clouds of sooty smoke. For supper, besides the food already prepared, there is coffee, fresh griddle-cakes and rashers of bacon, and every mouthful, no matter how plain the food, is a sweet morsel to the palate.

After supper all gather around the camp-fire, and while the shadows in the nooks and corners of the hills grow deeper there is a pleasant flow of conversation, which continues until bed-time; then all compose themselves to sleep beneath the ample shelter of the tent, while the stars come out softly overhead and the night wind rustles gently among the branches of the overhanging trees. The faithful dog lies down just

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WITH THE VANGUARD

COMMENTING on the wheat crop outlook the Cincinnati "Price Current" says:

"The June report of the Statistician of the Department of Agriculture places the average condition of the winter-wheat crop at 67.3, on the growing area. So far as our judgment and information goes this result is not subject to criticism. The statistician observes that this average compares with 83.4 as the mean of June averages for the past fifteen years. An analysis of the records discloses the fact that in recent years the averages of condition have had a higher significance in their relation to yield than in the earlier years. In other words, for the first five years of the past fifteen the mean of the June averages represented a basis equivalent to a yield of 14.3 bushels an acre for winter wheat for 100 of condition; the second period of five years, 15 bushels in yield was the equivalent of 100 of condition; the third period, ending with 1898, advanced this relation to 16.3 bushels as the equivalent of 100 of condition, on the basis of June returns. If the latter be adopted now in calculations, application of 67.3 condition points to 10.98 bushels as the indicated yield, which applied to 26,000,000 acres suggests 285,000,000 bushels. Again, on the basis of 15 bushels for 100 of condition, the indication is for an average yield of 10.09 bushels an acre, implying a total of 262,000,000 bushels. This latter result conforms to the application of the statistician's general average of condition for fifteen years to the general average of yield—making it appear that the official data now point to about 260,000,000 bushels for winter wheat.

"Taking the June condition of the spring wheat for ten years in its average relation to ultimate yield an acre, applying the condition now reported, 91.4, the indication as to yield is 13¼ bushels, which applied to 17,750,000 acres points to 235,000,000 bushels for spring wheat.

"It is thus made to appear that a reasonable interpretation of the official information now presented in regard to the wheat crop of 1899 is approximately 495,000,000 bushels. And this is as worthy of recognition at this time as any conclusions offering in regard to the wheat crop outlook."

In reviewing the department's June crop report "Bradstreet's" says:

"As regards wheat, the relatively more complete information as to area and condition has led to considerable figuring as to ultimate yield, and estimates seem to point, for the first time on record, to a yield of spring wheat equal to, if not exceeding, that of the winter-grown crop, say 275,000,000 bushels each, or a grand total of 550,000,000 bushels provisional yield, against an actual yield last year of 675,000,000 bushels and of 590,000,000 bushels in 1897. More bullish estimates point to a yield as low as 500,000,000 bushels in the aggregate. There is, of course, a serious decline in yield from that of last year foreshadowed by the above figures, and the report has naturally strengthened the views of the bulls, particularly as crop advices from abroad have not been nearly so good as a year ago. Some estimates of foreign origin, in fact, have pointed to a heavy aggregate reduction in the world's yield, one half of which, by the way, was to be furnished by this country. And yet the report has not proved nearly as stimulating as it reads on its face, chiefly because coincidentally with the receipt of bullish crop advices have come very heavy receipts of old wheat at primary points and large increases instead of the usual seasonable decreases in the visible supply. Whatever the effect of reduced yields may be on transportation interests, it is perhaps as well to remember that the 1898 large yield of wheat met a larger than ordinary consumptive demand, and that while visible supplies just at present are larger than one or two years ago, invisible supplies, so far as can be gathered, are not at all excessive, certainly not so heavy as to offset some of the more bullish predictions of considerably shortened yield throughout the world during the present year."

REAR-ADMIRAL KAUTZ, who recently settled affairs in Samoa, was born June 29, 1839, in Georgetown, Ohio. He was graduated at Annapolis in 1861. He was appointed lieutenant in 1861; lieutenant-commander in 1865; commander in 1872; captain in 1885; commodore in 1897, and rear-admiral in 1898. In the Civil War, while taking the prize brig Hannah Balch from Charleston, S. C., to Philadelphia, he was captured, June, 1861, by the Confederate privateer Winslow. In October, 1861, he was released on parole, went to Washington, and effected the first exchange of prisoners, over three hundred and fifty in number, authorized by President Lincoln. The naval officers besides himself who were released from prison and returned to duty by this exchange were Admiral John L. Worden and Lieutenant George L. Selden. He served on the flagship Hartford at Forts Jackson and St. Phillip, at the capture of New Orleans, April 24, 1862, and in the engagements at Vicksburg in June and July, 1862.

REAR-ADMIRAL ALBERT KAUTZ

REPLYING to an editorial in the American Grange Bulletin intimating that the policies advocated by the Department of Agriculture do not harmonize, Assistant Secretary Brigham says:

"The department will undoubtedly try to render assistance to our dependencies lately brought under our control in the production of crops which do not compete with the crops produced in this country. Unquestionably, great improvement may be made, and the reduction in the cost of production will probably enable our people to buy such products cheaper than they buy them to-day. So far as the productions that compete with those of our own farmers are concerned, it is not the expectation of the department that such products will be admitted to this country without the payment of a duty that will afford adequate protection to our own people. The farmers of the United States need have no fear of injury from any action or policy of this department.

"Your editorial seems to advocate the policy of government appropriations for the building of dams and ditches for irrigation purposes in the great West. Of course, I do not question your right to advocate this policy, but so far as the legislative committee of the National Grange is concerned, the action of that body in opposition to such appropriations clearly indicated their duty. It was entirely proper that such opposition should be made known to Congress and that the attention of the industrial commission should be called to the same in the hearing before that body. Both the secretary and the assistant secretary of the Department of Agriculture indorse the position taken by the National Grange on this subject. The time will doubtless come when these arid lands will be needed for the production of food. When that time comes we have no doubt that there will be an abundance of private capital ready to make the desired improvements, and that there will be no necessity of taxing the farmers of other portions of the country for the development of a competition against which there can be no protective tariff.

"The legislative committee of the National Grange can hardly be charged with inconsistency in failing to antagonize the war and the appropriations for carrying it on. The National Grange at its last session failed to go on record in opposition to expansion. It is very safe to say that the anti-expansion element has very little support among the intelligent, patriotic farmers of the country. They understand well that in the commercial struggles for the possession of the markets of the world the United States of America cannot afford to be idle. We are already producing a large surplus that must be marketed somewhere, or hard times and great suffering will come to our people. There is but little question that a very strong combination among some of the European nations is being formed for the purpose of shutting out our products from their markets and from the great markets that will soon be thrown open in Asia. The United States of America must maintain her right to enter those markets even if she has to fight for it.

"If such a struggle should come, and we hope it may not, the possession of the Philippine islands will be of untold value to our people. There is no question in my mind that the majority of people will sustain the government. No patriot will ask our soldiers to turn their backs to a foe when under fire. Our flag will continue to float over those islands so long as the interests of this country and the interests of the inhabitants of that country will be promoted thereby, and the government of the United States will decide when, if ever, these interests will be promoted by withdrawal. We have always had the anti-expansionists with us, but their views have never been adopted by our people, and will not be more acceptable now. The people, including the farmers, will follow the flag and sustain those who fight under its folds without much regard for the outcries from Boston and sympathizers elsewhere. Time was when Boston influence was a power in the land. That time has passed. The mighty West (or what was once the West) is now the controlling power, and our future progress will not be stayed by critics who are so narrow between the eyes that they seem to look out of one hole. The American farmer is broad and liberal in his views, and understands the true situation better than these critics, and will not uphold them in their narrow, unpatriotic policy."

IN A special cable message to the Chicago "Times-Herald" Prof. Worcester, a member of the Philippine commission, specifically and comprehensively denies the lying statements about alleged cruelties and atrocities to Filipinos by American soldiers that have been industriously and mendaciously circulated by some of the anti-expansion papers of this country. Prof. Worcester says, in part:

"An instance is the story of Anthony Michaea, who is reported as saying that we bombarded a place called Malabon, and then went in and killed every native we met—men, women and children.

"I was personally present on the occasion in question. The truth of the matter is that Malahon was never bombarded, despite the fact that it was within reach of the fleet and the field-guns. The town had been abandoned by the natives before our approach except for a lot of sharpshooters, who had positions in the swamp on the outskirts.

"One Hotchkiss and one 3.2-inch gun were fired on them. Our troops first moved to the north without entering the town. The insurgents were driven out the following day while trying to burn the place. No women or children were killed; there were none there to be killed.

"I have personally inspected all battlefields from Caloocan to Malolos. Once I was on the field before the wounded were removed, and repeatedly I was there before the dead were buried. I never saw a single woman or child wounded or dead. I have found, on the contrary, wounded rebels whose injuries had been dressed by American surgeons before the firing had ceased, and who had also been provided with food and water.

"The insurgent wounded were brought to Manila and tended in our hospitals, or even taken care of in private hospitals, the government paying all the expenses.

"When cured the wounded can hardly be driven away. All the prisoners are well fed and well treated, and many say they are glad they have had the experience and learned to know the Americans. The released prisoners and the recovered wounded are our best missionaries, but many of them are unwilling to return to their own people.

"It is absolutely false that any order was ever issued looking toward the killing of men who might be captured. The American soldiers have repeatedly taken prisoners under circumstances affording abundant excuse for killing, with the provocation very strong. I know positively that the city guards have been ordered to fire on soldiers caught looting it. It was not practicable to make arrests. The natives themselves report that the troops have saved property and protected life during the recent operations, and the effect of their conduct has been excellent.

"It is a great mistake to suppose we are fighting the Filipinos as a whole. At least eighty per cent of the population detest this war, and the only serious trouble is in a few Tagalog provinces in Luzon. Other provinces in this island are now compelled by the armed force of the insurgents to submit to Tagalog rules. The people in them are praying for the coming of the Americans. The present rulers are hated on account of their jobbery and oppression, and even among the Tagalogs the common people want peace.

"Aguinaldo and his Congress recently appointed a commission empowered to negotiate peace on the terms offered in our proclamation. The military leaders interfered, however, and dissolved the commission.

"The war is kept up by a few leaders, and only with the greatest difficulty. The heads of the natives are constantly filled with lies, and the wildest tales are circulated by the insurgent leaders. False and slanderous reports are manufactured in Hong-Kong and Singapore, and scattered broadcast. The accounts of alleged atrocities printed in American papers are copied by the insurgent press and cause incalculable harm. They cost good American lives.

"Nevertheless, the situation is steadily improving. The war is being most humanely conducted; the hungry are fed; the families of the insurgent leaders are granted protection in Manila, and even allowed to enter through the lines. About two hundred persons are coming daily into the city from the insurgent territory, and thousands are eager to come. Every one here is working in the interest of justice, order and lasting peace, and all are anxious for the best good of the country and the people. To this end lawlessness must be put down with a firm hand, and armed oppression must be made to cease."

Some Health Hints

There are few people, indeed, who have not their periodical or chronic ailments. And many of these ailments could he so easily avoided. The crimes against the common laws of health and against ordinary common sense are so prevailing, however, that it is a wonder we still see people in fairly good health. We eat and drink artificial foods, and among them the most indigestible things. We use decidedly one-sided rations. Then to offset, as we suppose, the errors of diet, we go to the drug-store and fill up on pills and all sorts of patented and mysterious compounds which appear to give relief for the moment, only to make a bad matter worse in the end. Patent-medicine venders and druggists get rich in purse and we get poor in health. That is the penalty for our folly. Outraged nature, however, is very patient and a powerful healer. So we often manage to reach a good old age (perhaps with more or less unnecessary suffering) in spite of our mistakes in living and in taking what we suppose to be safe medicines.

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Of course, our family physicians like to have us consult them pretty freely. That is to their interest, for they want to live and get rich, too. But there is much truth in what Dr. St. John, of Charlton, New York, says in a recent issue of the "Farm Journal:" "It is an evident fallacy to suppose that when the best physicians of all times have failed to find a remedy for a certain disease (tuberculosis, for example) that some man in New York or Chicago has a remedy that will never fail in these cases, and has had it in use for at least half a century. It is also a grave fallacy to suppose that some one whom you never saw, and who knows nothing of you or your history, could be more advantageous in treating you than a reliable physician acquainted with you and your surroundings." It is said that he who is his own lawyer often has a fool for a client. And it is surely equally true that many who undertake to be their own doctor have a fool for their patient. People with little judgment and experience can follow but one safe course, and that is to call on or for a good physician as soon as it appears that there is some serious trouble. The quack doctoring of country people (and I believe of the less intelligent classes of city people none the less) is something really "awful." The first thing to do when a child (and an older person as well) is taken sick is to determine whether the sickness is serious enough to require the interference of a physician. A good many of our minor ailments come from excesses in eating and drinking. Nature often provides her own remedies. Fairly good judgment and some experience may relieve you of the necessity of calling the doctor. The first thing a physician will do when he comes to see a patient is to look at his tongue and examine his temperature, or as formerly, to feel his pulse. Serious acute disturbances are always accompanied by fever. As long as the temperature is normal nothing very serious can be the matter with the patient. I always carry a physicians' thermometer with me or have it in my desk. It is one of the things that I believe should be in every country home. Some member or members of the family should learn how to use it. It is a simple matter, and then when one of the household gets sick, you can soon tell whether there is any need of sending for the doctor or whether the ailment will be likely to yield to home treatment. You can buy a good thermometer for about $1.25, and if it saves you one doctor's visit it will have more than paid for itself.

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Stomach Troubles

A good many of our minor sicknesses are due to fits of indigestion, and these again to eating and drinking too much or things we should not have taken into our stomachs. Some people can eat and digest almost anything so long as they are taken in reasonable quantities. Most of us, however, if we are at all observing, will discover that there are certain things which, when taken into the stomach even in ordinary quantity only, are liable to upset our whole internal machinery. I know of people for whom even the strawberry acts as a poison. If I indulge freely in rich chocolates, I am sure to have trouble with my stomach, and, of course, with my head, also. Indigestion with some persons always brings on a headache. The sensible thing for each individual to do is to keep close watch of these things, and then avoid whatever seems to disagree with him. One person may have to do without strong coffee, or coffee of any kind except the cereal imitation, or that made of the soy-bean (American coffee-berry). Another may have to let rich pastry or cheese alone, etc. Whatever it is, however, and may it he ever so palatable to you and tempting, shun it as you would poison. That is the very first rule which you must observe if you desire to remain free from these annoying stomach troubles. Also have your meals as regular as clock-work, Sunday as well as week-day. Satisfy your natural appetite, but never eat so much that you feel uncomfortably full after eating. There is more to this than most people imagine. The stomach sympathizes with liver and bowels. When the former is all upset the liver and bowels will soon refuse to do their legitimate work. The waste materials that in the regular order of things ought to be discharged promptly remain in the bowels and must necessarily poison the blood. The natural consequence is the appearance of all sorts of ailments which may assume a chronic and perhaps very serious character. The prescription which the physician will give you when called to attend a case of acute stomach disorder is to clear out your stomach and bowels. If you are able to diagnose your own case as one of this kind you can prescribe your own medicine.

To clean out the stomach a stomach-pump is a good thing. But you can use a simple emetic just as well. A cupful of tepid water alone will do the business in many cases. If it does not, the addition of a teaspoonful of salt will surely do it. Then drink lots of hot water. To make thorough work of this, the physician would most likely prescribe calomel or rhubarb. The common powdered rhubarb is a good thing, and I always have it in the house. The druggist will sell you an ounce for twenty-five cents. It is almost indispensable for children. Put a teaspoonful into a cup. Add a pinch (half teaspoonful) of soda carbonate (salaratus), a few drops of peppermint essence, and sugar enough to sweeten. Then fill up the cup with boiling water, and set away to cool. Give one, two or three teaspoonfuls of this (from the top without stirring) every half hour until the desired effect is obtained. This remedy is excellent in all acute stomach and bowel troubles, and if taken in time will cure the various forms of summer complaint, cholera infantum, etc. For a quicker-acting means to clear out stomach and bowels it would not be easy to find anything much better than sulphate of soda (Glauber's salts). Take a teaspoonful of this in a cupful of hot water half an hour before breakfast, and you will most likely have thorough bowel action by breakfast-time. These remedies I believe are as good as the best that the doctor could prescribe. The next thing you want to do is to give your stomach a rest. Eat sparingly and only the most easily digested food. It will not be long before a trouble of this kind will disappear. However, there is still another means of clearing out the bowels in a thorough way, and that is by flooding with warm (almost hot) water. The fountain-syringe (three or four quart size) is a convenience which should be found in every house. Some children are habitually costive. The only satisfactory way to deal with cases of this kind is by the use of warm water injections. With the syringe you can force a thorough movement of the bowels at any time, and this without doing injury. There is no irritation or reaction as often in cases of forcing a passage with medicines. This syringe is an excellent way of washing waste materials which would remain to irritate and to poison the blood out of the bowels. Take as much warm water, with or without soap, as you can hold, and retain it as long as possible. It is a wash for the kidneys as well as for the bowels. These syringes are now offered for sale in our big department-stores at a very small figure. But I think it is good economy to buy the heavier ones at rubber-stores, even if they cost more. They last very much longer. In my own family I have cured a bad case of chronic catarrh of the bowels by the daily use of the syringe, and without any medicine otherwise.

T. GREINER.

SALIENT FARM NOTES

Pure Kerosene as an Insecticide

Just before my roses came into bloom the rose-slug (a small, almost transparent green worm) attacked the leaves. There were hundreds of them on each bush, and in a few days they would have destroyed every leaf. I was "right smart" mad when I discovered them, and owing to the continued wet weather was rushed with work, so had no time to hunt and apply the usual remedies. Hurriedly filling the pint can of my little tin sprayer with pure kerosene, I sprayed every bush in a few moments, and then went on with my other work. In the evening I went to the bushes to see how badly damaged they were, and to my surprise found them all right, but every slug was dead and gone. That happened two weeks ago, and the bushes are alive and thrifty yet, with never a sign of a slug on them.

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It was the quickest and most thorough job of insect-destroying I ever did. Pure kerosene will often destroy the leaves of plants to which it is applied, but the little sprayers put it on in such a fine mist—it much resembles smoke as it comes out—that many kinds of plants will stand it if the day is bright and drying when it is put on. To all soft-bodied worms, and, in fact, to almost any sort of worm or insect, kerosene is deadly. I use my little tin sprayer in the poultry-house once a week, giving the perches, nests and walls a thorough spraying. A pint of kerosene will cover a great deal of surface when applied with one of the atomizers, and no mite or louse that it strikes ever bites another hen. Very often both lice and mites infest the coop in which a hen and brood of chicks are kept. I have heretofore destroyed or kept them in check by burning a crumpled-up newspaper in them, but often that is a rather dangerous method. Hereafter I shall do the business with my little forty-cent tin sprayer. If cabbage-worms infest my cabbages I shall try kerosene on a few of them. I think the worms will perish and the cabbages will not he injured.

* * *

Weed-seed

Last spring, 1898, I bought a quantity of timothy-seed that was said to he exceptionally free from weed-seeds and sowed it in my orchard. I wanted the timothy in there to hold up the clover. This year I have an immense crop of oxeye daisy wherever I sowed that seed. Had I examined the seed carefully with a glass I would have seen the trash among it, but I took the word of the dealer that it was all right and sowed it. He ought to he compelled to pull out every one of those daisies by hand. Three years ago I hired a man to bring me several loads of manure, which he said he could get for next to nothing. It appeared to be good, half-rotted stable manure, and I had him spread it on a small field of timothy and clover. Last summer I discovered that there was an average of one yellow-dock plant to each square foot of land that he manured. The only thing to be done was to plow it up and put it in corn. I showed it to a farmer friend and he laughed heartily. "Got more than you paid for that time; but not what I would consider a first-class bargain!"

* * *

Flies at Milking-time

Flies are here again, and milking is not the pleasantest job in the world. I milk in a dark stable, but if one remains in it long he begins to think of Turkish baths. The stable is on the east side of a barn and the milking is done in the morning before the sun heats it, and in the evening the barn shades it long enough to have it somewhat cooled by milking-time. Still, when one gets in there with a cow the temperature rises at a remarkable rate. When I had no dark stable to milk in I used to have a cover of light gunny-sacking to spread over the cow. It reached from her head down over her tail and touched the ground on either side of her. When a cow gets used to it she seems glad to have it on, but a nervous or "scary" cow will have to be tied a few times and given a little bran or shelled corn to keep her quiet. Such a contrivance is next to a darkened stable, and after one uses it a week he would not he without it for twenty times the few cents it costs.

* * *

Mistake With Asparagus

When strawberries ripen our asparagus becomes a back number and is allowed to grow up and prepare for another season. I made a mistake with my asparagus the past season, and in consequence the shoots were not so large, nor did they come so quickly as one would like. In fact, our "grass" was only second-rate goods this year. Last fall I covered the bed with old, rotted manure, out of which about all that was of value had been burned by the sun and leached by the rains of last summer. It made a nice mulch, but there was no strength in it. Thinking to help it out in the spring I applied a good dressing of nitrate of soda to the rows, but so far as good effect was concerned I might as well have applied so much sawdust. This coming autumn I will do as I should have done last year; put on a six-inch covering of fresh, strong stable manure as soon as the tops are removed. Next spring, as soon as hard frosts are over, I will rake the coarse, leached-out material on either side of the rows to walk on in cutting the shoots when the ground is wet and sticky, and also to serve as a mulch to keep weeds down and save labor. I really knew better than I did last fall, but thought it would answer. It is always best, after all, to do things right and thoroughly.

* * *

Mistakes With Shade-trees

I see where I made another mistake, or two of them. I wanted a couple of shade-trees on the outer edge of the lawn, and decided that they might as well be fruit-trees and bear something besides leaves as not, so after looking the matter up a little, I planted two Stark apples. To be sure, they are trees, and they shade the spots where they are, but they are about as ornamental as old salt-barrels. If I had known what I do now their places would now be occupied by Grimes' Golden trees. These are neat, compact and really ornamental trees, while the fruit is not surpassed by any apple that grows. Along the path to the gate I decided to plant another fruit-bearing shade-tree, and like a ninny selected a Howell pear. If anybody can see an atom of ornament about it I should be glad to have it pointed out. The fruit is first-class, but the shape of the tree is anything but fair to look upon. Had I planted instead either a Keiffer or Koonce pear I would now have a tree that would be an ornament to any ground. The fruit of the Keiffer, when properly ripened, is good for dessert, and excellent stewed, canned or in pies, while that of the Koonce, which is an early pear, is good any way.

* * *

Plums

When I was planting plums I planted two Pottawattamie trees at a venture, and it would appear that it was the right thing to do. The fruit is really desirable only in its raw state, and one can sit under the tree and eat thirty to fifty at almost any time. They ripen a few at a time and drop off as soon as ripe. The skin and the flesh immediately about the stone would reduce the mouth of a political orator to half its size in thirty seconds, but the juice and principal portion of the flesh are splendid. The Burbank and Satsuma plums are the best I know of for cooking. In pies or simply stewed they are very good, tasting much like apricots. The trees are not ornamental.

* * *

Hoeing Corn

I have been obliged to go back to "first principles" and go into the corn-field with a hoe. The rains prevented cultivation while the corn was small, and weeds came up and overtook the corn. I see several others have taken a fancy to hoeing lately, and are hacking away at the common enemy. One can get close to the corn-plant with the cultivator and root out or cover up a weed if it is not directly in the hill and high as the corn. In that case there is no way of getting it out except by hoeing or pulling. In my opinion it will pay to hire men (but not boys) at $1 a day to get the weeds out of the hills and rows where they cannot be reached by the cultivator.

FRED GRUNDY.

PEKIN DUCKS in the United States have proven by far the most profitable of all breeds when raised for market on a large scale. Several thousand young ducks are often yarded on five acres of ground—making the ground, by the way, intensely rich—but the most successful duck-farms have large areas available for the cultivation of green feeds for the growing stock—root-crops and green food of various kinds. Ducks will consume an immense amount of green food, and such feeding is considered necessary to keep them in best condition for early laying. The most profitable time at which to market ducklings is considered to be when they weigh about five pounds. They will then be in the neighborhood of ten weeks old and will have cost to raise about twenty or twenty-five cents each.

GUY E. MITCHELL.

OUR FARM

FARM THEORY AND PRACTICE

THE FARMER'S PAPER.—The FARM AND FIRESIDE goes to hundreds of thousands of readers. The contributors to its columns, selected by its editors, seek to tell facts that will be helpful, and especially do they seek not to be misleading. Occasionally there is a man who thinks that the chance of making money by using some farm writer for his own persoual gain is too great to be missed, and being a stranger he seeks the shortest way into the graces of that writer. He always has something for sale, and what he wants is free advertising in the reading columns of the paper. It is his belief that if he sends one any sort of implement without charge and without request he has in some way a right to a favorable notice of it. People should understand that publishers keep their advertising columns for advertising, and that reputable farm writers are not for sale anyway. A manufacturer has no claim upon a man wben be sends his wares to him without an order, and he can have no claim upon him in any way that would require a reading notice to secure adjustment. It is perfectly legitimate tbat a practical man mention any good implement that he is using in the culture of crops, provided he mention it not for advertising purposes, but to help a brotber farmer to the best for particular purposes, as described in tbe article. But the first thought of the writer should not be to mislead. He cannot notice favorably or unfavorably any wares of dealers for personal ends, and the man who would use his privileges in such a way is absolutely dishonest. We often mention desirable tools just as we mention desirable varieties of fruit and grain, but the gift of a tool to a writer for the sake of a favorable notice it could not otberwise get is an insult to an honest man and will never secure tbe notice from bim.

* * *

MISTAKEN VIEWS.—Some few readers of farm journals bave queer views of the duties

LEAVES OF THE METCALFE BEAN

of a contributor, anyway. Tbey send him by mail or express a new variety of fruit, vegetable or grain, and expect a careful trial of tbe same, often in comparison with staudard varieties, and a full report. They expect bim to spend the time, furnish the stamps, and mention the test in some farm paper. They expect more than they should. Courtesy in such cases demands that they learn first whether one is willing to take the trouble, and when courteous inquiry is made beforehand the labor is much easier. One man wants you to act as a sort of real-estate agent, and anotber would use you as a patent agency. All readers sbould know what most do know now, and that is that all farm writers worthy of the name are men who are more careful lest they advise to some one's injury than they are of anything else. Tbat is the first care while trying to help. They recommend that in which they believe, and upon that they rest their reputation and their hope of usefulness.

And yet there are cases in which the individual may be helped without injury to others. A FARM AND FIRESIDE reader wrote me a few weeks ago saying that he had invented a plow with pulveriziug moldboard that did excellent work, but he is a poor man and could not handle his patent. Would I describe the plow from circulars sent me? I wrote the man, but tbe letter has been returned unopened. I felt sure that if the plow was a good thing the paper would publish a short, clear statement of its advantages over the prevailing styles.

* * *

MARKETING INVENTIONS.—Many persons at some time in life secure a patent, and for their benefit, as well as for that of the reader mentioned, I wish to say that the practical way of disposing of a patent on an agricultural implement is to have a working model made, and then show it to a manufacturer and secure a promise to witness a working test. It is the work that counts. Manufacturers are always after improvements. There are tens of thousands of patents and the ideas are usually impracticable. Manufacturers cannot be fooled with ease. They want to see the work of the machine. If it is superior to the work of other machines they are quick to want it. No one should imagine that a pretty patent or glowing description will have any weight with a business man. These things are cheap. If one has a device of merit, show what a working machine can do if that be possible. Any live manufacturer will witness a test near at hand if he is interested along that line. Show up the merit of the new invention in this way, and if that merit be superior the sale is easily made. The inexperienced man is apt to spend some money upon agencies for the sale of patents. I should not do tbis. It means sure expense and uncertain receipts. These people watcb the lists of patentees, and send them enticing circulars. That is easy to do. If they are so sure a sale can be made, tell them to make the sale and deduct all fees when the transfer of patent is made by you. Most patents are worthless. They are a heavy source of loss to many. But a meritorious and novel device is a valuable thing. If you have such do not depend upon reading notices, circulars or advertisements, but go to manufacturers, demonstrate the merit by practical means, and all else will be easy.

* * *

STICKING TO ONE'S BUSINESS.—While the farmer may, if he desires, spend some time and thought upon new devices and invest a little money in protecting his invention with a patent, he should go upon the market always to sell and never to buy. There are few poorer investments than the patent rights offered for sale to farmers. All over this country farmers have wasted big sums of money in such rights, and yet some others can learn only by experience. The patent-right man has no rigbts to sell tbat the farmer needs. The farmer already has a right to attend to his own business of farming, and wben be neglects it and buys rights that are being hawked through the country by shrewd men, ninety-nine cases out of a hundred he finds, when too late, that he has invested in an unprofitable thing, and has lost hard-earned money. The manufacturer knows bis business, and so it is with the mercbant and tbe speculator. Every man to his trade. But if the farmer must bave some side business, do not let its profitableness depend upon a purchase from a stranger of a right to make something tbat a shrewd mauufacturer is unwilling to make. Too many smootb people are living off of farmers, and this will remain so until we learn that we cannot beat a stranger at his own game. If there is a lot of money in a scheme for a farmer it is too valuable to tbe first owner to be offered to farmers at a sacrifice. No one is hunting us up to give us money. Let's leave strangers alone; they are too hard to find when we would like to have some little point explained. The safe rule is, buy only wbat is needed, buy for cash, and buy only from parties well known personally or by reputation.

DAVID.

A PROMISING LEGUME

The attention which is being directed to developing special drought-resisting forage crops is bringing into view some valuable plants which have been heretofore somewhat neglected. In the Southwest, where the conditions are especially dry or semi-arid, Nature has developed a number of wild leguminosae which are peculiarly fitted to withstand droughts, but which are capable of great improvement under cultivation. One of the most promising of these wild species is the Metcalfe bean (Phaseolus retusus). This bean is a perennial and develops enormous fleshy roots, often growing to the size of large yams and weighing as much as thirty pounds. All perennials growing in semi-arid regions are supplied with some special provision to enable them to withstand drought and tide over their growth from one rainy

BLOSSOM

season to anotber. In the Metcalfe bean the root is a great storehouse of water. The top of this fleshy root is found six or seven inches below the surface of the ground; this will allow the soil to be thoroughly plowed or cultivated without danger of destroying the crowns. The vines grow in all directions from the crowns, much after the manner of the wild American morning-glory; tbey grow eight or ten feet, or even more, during the first season, and even in the wild state produce a large amount of forage. Tbe leaves are thick and heavy and well adapted to withstand heat. Under cultivation tbe Metcalfe bean shows great improvement over the wild plant. The quantity and quality of the forage is increased with ordinary farm culture, and the bean sbows capability for great development with one or two years' cultivation. The forage can be cut twice a season.

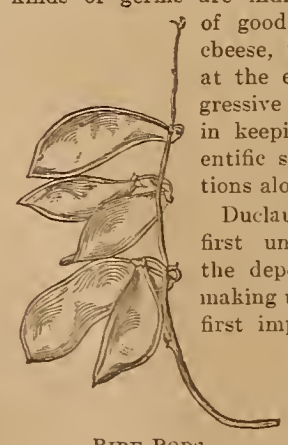
Like all leguminous plants, this bean is a gatherer of free nitrogen from the air, which it stores up in its roots and leaves. It forms a highly nitrogenous food, and the beans themselves are rich in meat-producing compounds. Under cultivation the beans increase from one to two in number, and from two to three in a pod.

GUY E. MITCHELL.

BETTER CHEESE

If tbe knowledge of certain branches of bacteriology is necessary to tbe butter-maker aud the general dairyman, and becomes more and more so as we recognize the rational, scientific basis on which all dairy industries must rest, it is not less important in cheese-making.

Slowly but surely tbe pure-culture system is entering into the industries which are based upon the growth and activities of bacteria, molds and other microbes. It is the system used by farmers and horticulturists from time immemorial—that pure seed will produce a pure crop. Knowing tbat the production of butter and cheese is dependent upon living bacteria; that the aroma—"tbe flavor which governs market prices"—is produced by bacteria; that certain definite kinds of germs are indirectly the makers of good butter and good cbeese, we cannot wonder at the eagerness that progressive dairymen manifest in keeping apace witb scientific studies and innovations along these lines.



RIPE PODS

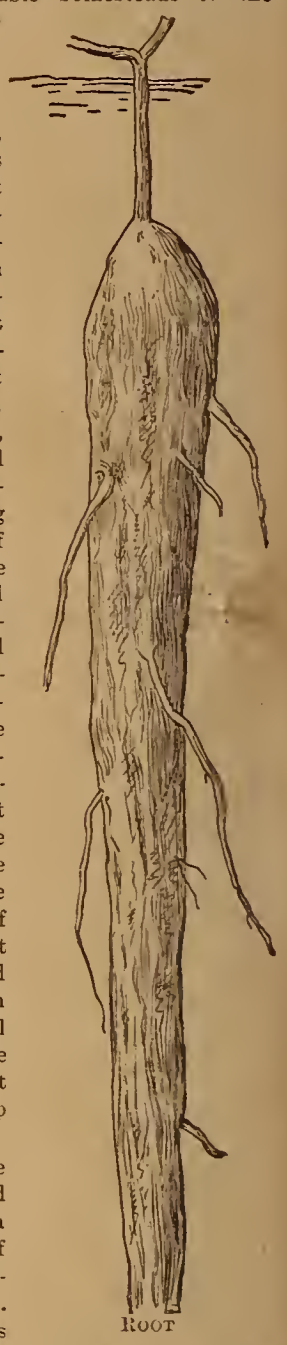
Duclaux, the Frenchman, first undertook to study the dependence of cheese-making upou germ life. His first important result was that one of the characteristics of cheese-making consists in the rendering soluble of a part of the casein. This led him to conclude that such bacteria as were active in this transformation were also the chief agents in the curing of the cheese. This view has been somewhat modified by Freudenreich, who proved that the lactic acid bacteria would cause the solution of the casein, provided there was uot too much lactic acid present. In the ripening of Swiss cheese the lactic acid bacteria are indeed of main importance.

The curing of all varieties of firm cheese should properly result in the formation of a product whose taste is pure. During the after-curing or storing there is formed certain aromatic substances; the cheese receives its peculiar flavor. It bas been proven for the Swiss and the Cheddar cheese that during the curing proper the number of lactic bacteria is slowly decreased, while the after-curing is characterized by the development of distinct forms of flavor-producing germs.

Soft cheese contains, on account of its large contents of whey, too much lactic acid to permit a prolific growth of lactic acid bacteria. Here the rapid transformation of the caseiu is caused by certain molds.

As in most other dairy countries much of our cheese lacks both uniformity and fine flavors. Imported cheese continues to be favored by people of cultivated tastes and ample means. The prices on our cheese markets are far from being satisfactory.

One of tbe chief means of obtaining botb uniformity and more and better flavor in our creamery cbeese would be to examine what microbes are active in the curing of tbe cheese, and to submit these forms to pure cultivation. By addiug such pure cultures to the milk and continuing this as long as any irregularities are found in the cbeese we should at lengtb succeed in rendering our cheese-rooms veritable bomesteads to the bacteria wbich are active in tbe production of a good product.



ROOT

Professor Storcb, of Copenhagen, has found that the best creamery cheese—the cheese that appears richest in taste without containing the largest amount of fat—holds the largest amount of water. Our attention, tben, should be turned toward tbe question of increasing the percentage of water in such cbeese as is too dry and meager. As all mechanical process and all temperatures involved in the making of soft cbeese can be easily mastered without detriment to tbe product itself, this can be easily done. In the case of firm cheese the percentage of water—the amouut of wbey—is limited somewbat, hence an excess of water will give rise to cbeese faults, sucb as soft crust, puffed-up curd, etc.

Tbe use of pure cultures of good cheese bacteria would not, of course, obviate mechanical difficulties. Yet if the germs productive of a good curd and a fine flavor were present in large numbers, fresh aud vigorous, the temperature during the process of fermentation might be raised, wbich, with a larger amount of water in the curd, would tend to shorten the period of curing.

Thus, tbe acquirement of some knowledge along the lines of dairy bacteriology might give rise to larger and better yields and a shorteniug of the period of curing.

The introduction of the pure-culture system will play its most important role in the manufacture of soft cheese. The curing of the latter cannot be satisfactory except through the ageucy of certain molds which may or may not inhabit the curing-room, but which could be introduced in pure cultures into the curd itself and into the curing-room.

Such knowledge and iusight as is necessary in bringiug about such reforms as these does uot lie above or below the average cheese-maker. The map of our country is dotted with agricultural schools and laboratories where such questions as these are studied practically and scientifically, and good text-books may be had from which he who does not know may learn. And we no doubt all agree that he who will not learn can have no place in the development of the rational dairy interests.

J. CHRISTIAN BAY.

NOTES FROM GARDEN AND FIELD

THE ARSENICAL POISONS.—The user of Paris green has not often if ever found fault with its expensiveness. I usually have paid twenty-five cents a pound for it. At one time I got it as cheap as seventeen or eighteen cents a pound. When it only takes one pound or so to clear an acre of potatoes from potato-bugs for some weeks there is no kick coming on account of cost. The objections to this arsenical compound are of a different character. I have tried to find a substitute only because Paris green does not dissolve in water, and is only with difficulty kept in suspension. The new insect-killer which I now use, namely, arsenite of lime, as spoken of in last issue, does not meet with this objection. The stations have told us that it is also much cheaper than Paris green, and surely it is if you can buy arsenic at ordinary wholesale rates. If you go to the ordinary drug-store for it you may have to pay forty cents a pound for it, and as we are told to use about a pound of arsenic (made into arsenite of lime) to two hundred gallons of water or Bordeaux mixture, the same as when using Paris green, the home-made arsenite of lime may, after all, be a good deal dearer. Neither would we care much about that if the arsenite will work so much more satisfactorily than the green. The average farmer has little chance to buy from a wholesale house. I went into a wholesale drug-store in Buffalo the other day, and asked for a few pounds of arsenic. At first I was refused to be served, not being a retailer. But my representation that I was a farmer and fruit-grower, and needed the arsenic in larger quantities for agricultural purposes, finally won the drug-dealer over, and he sold me the arsenic at ten cents a pound. That, of course, makes my poison very cheap. I have also found that the usually recommended proportion of Paris green (one pound to two hundred gallons) is rather weak. I like to see quick effects. When I apply poison to my potato-vines I do not care to see the slugs continue to eat for three or four days longer before they finally give up the ghost. For that reason I have preferred to use one pound of Paris green to every seventy-five or even fifty gallons, and thus to put a rather sudden stop to all further destruction of the potato foliage. I have so few potato-bugs this year that I may not be able to tell very soon what exact proportion of the arsenite of lime will be needed to give the same prompt relief. I believe, however, that the officially recommended dose (one pound to about two hundred gallons) will be about right. If I make it a little stronger it will do no harm. Of course, the arsenic is much stronger than its compound, Paris green.

* * *

CARE WITH POISONS.—The one thing which I do not relish about this spraying business is to have poisons and poisoned liquids standing and lying about on the premises. I have little children, and children will get into all sorts of scrapes. I do not believe that this can be helped. The only safe way is to have poisons put away where the little folks cannot get at them. There should be a room, closet, or at least a box or drawer that can be locked. All packages containing poisonous substances, such as Paris green, copper sulphate, hellebore, bichlorid of mercury, etc., all properly labeled, should be deposited into this receptacle or room, and the same be kept tightly and carefully locked all the time. A few days ago I made a kettleful of arsenite of lime, and being afraid that the little boy might get at it while it was left for an hour or two on a bench in the "workshop" (a room in the barn), I set the kettle up high and dry on top of a large grain-bin supposed to be tight all around (to keep out mice and rats). The hired man did not notice the kettle, and on opening the lid to get oats for the horses, turned the kettle over, spilling the poisonous contents all over the top of the bin. Unfortunately there was a knot-hole in the top, and the poisoned lime-water poured right down on the oats. I happened to come along a few minutes later, and, of course, had all the oats shoveled into bags to be set out of the way, and later on to be sowed with peas for late fall feed. But I might have lost my horses by the blunder of leaving the poison standing around even for a couple of hours. As it was I escaped by a scratch.

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PROPER USE OF TOOLS.—The improvement in agricultural tools is going merrily on. Almost every new season brings us some new or greatly improved implement that makes our work lighter or more satisfactory. But the soil-tiller must do his part, by learning to understand the peculiarities of the tools he works with. In fact, it has become absolutely necessary for him to be a pretty good mechanic himself. Many a good tool is put aside as no good and left standing around unused simply because it has not done exactly what was expected of it in the first clumsy trial. I have just had some such experience myself. My garden-seed drills are now so complete and almost perfect that it seems no further improvement is possible. The manufacturers of the "Iron Age" implements furnished me a drill which can be used both as a hill and drill dropper. I tried it as a hill-dropper for planting sweet corn, but soon found that the shut-off was not working properly, so that the machine clogged more or less. I set the machine aside for awhile, thinking that the manufacturers had made a mistake in certain parts that needed rectifying before the machine could be expected to do good work. A few days later, having a little time, I made a more thorough inspection of the offending part, and soon found that the whole trouble was due to the fact that the wire-coil spring on the shut-off would bend in such a shape as to rub very lightly against the casting (seed-hopper), thus preventing the full opening of the shut-off. The trouble once found the remedy was easy enough. One of the common double-pointed carpet-tacks driven into the handle inside, a few inches from the hopper and over the string attached to the shut-off, so that the direction of draft of shut-off was slightly changed thereby, remedied all the trouble. I am now using this excellent tool right along, and am highly pleased with it. Similar instances happen every day. We must get fully acquainted with our tools before we can expect them to give us their best service.

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THE DIFFERENCE IN LIME.—In my last communication I spoke of the need of getting a good quality of lime for making the Bordeaux mixture. I now find that if we use some kinds of burnt limestone (the better grades), less than three pounds of it will be needed to each four pounds of copper sulphate in order to make the standard mixture come up to the ferrocyanide of potassium test. If we go by weight only, the orthodox rules are to use four pounds each of lime and copper sulphate. If we go by the chemical test (the solution of ferrocyanide or yellow prussiate of potassium) we will be apt to use much less lime. Perhaps it may be well in any case to use an excess of lime; so if we throw in a little extra lime after the mentioned solution fails to give the brown spots in the Bordeaux mixture, it may be all the better.

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THE FRUIT OUTLOOK.—The fruit outlook in this vicinity does not appear to be quite as favorable as it seemed a few weeks ago. The apples have set very sparingly, some of the earlier sorts excepted. This famous apple county will surely not flood the markets of the world, or even of the state, with winter fruit. Cherries are few; peaches almost none, and the rot is already attacking the plum. The fruit of the Bartlett and other pears is badly affected with scab here and there, and altogether the earlier promise of plenty of fruits will not be fulfilled. To judge from appearances in this part of the country, all fruits should bring a good price this year. And the same seems to hold good of the products of the vegetable-garden. As for myself, I find a better demand in my home market than ever, and shall continue to plant. There is still money in gardening.

T. GREINER.

FRUIT

The importance of increasing the home supply of fruit is discussed more or less from one end of the year to the other without apparently affecting present conditions. In some parts of the country the fruit crop grows less every year, and in these places the crop must fail sooner or later because there appears to be no interest in renewing orchards.

A young and thrifty farmer exclaimed: "I sold apples last fall at two and one half and three dollars a barrel, and to-day (March 16, 1899) the same varieties of apples are selling at retail at seventy cents a peck. But I'll go hungry before I'll sell again for the benefit of the middlemen. I could have stored my apples and taken that profit, myself, but I wanted money and had to sell." A few days ago, wishing a few table apples for "show" and "company," I paid fifty cents for twelve apples.

American fruit is a luxury usually at any time of the year for the greater part of the people, and apples ought to be common, every-day food. There is more health in an apple than most consumers appreciate. At harvest-time on some farms apples are plenty, and the farmer may complain that there is little profit in hauling to market. But a man with a grain of speculation (call it sense or prudence) does not go to market when prices are down or when the market is oversupplied, unless, like the farmer referred to, he must have immediately what he can get.

Properly stored, some apples may be kept almost to the time when apples come again. I have had Baldwins and Greenings in May and Russets in July. There is no reason why the farmer should not hold his apples as he often does his potatoes. There is no risk in it, provided the apples are ripe and sound and carefully stored. It may be stated positively that until conditions change, apples will be high in price after January 1st, in any year, and that the market will take eagerly almost any quantity of good apples.

Throughout New England and the central and northern belt of this country, east of the Missouri river (and perhaps west of it) is good apple-tree ground, capable of producing apples enough to pay the national debt. Millions of acres, practically waste lands to-day, some of it so strewn with rocks and boulders that the earth appears to be covered, now producing nothing (except tax bills), will nourish apple-trees of certain varieties.

Ten years ago a farmer was advised to set out apple-trees in a rocky pasture where a sheep would starve. Against his better judgment, as he thought, he set out an orchard without removing the stones. The trees grew and flourished, and to-day the trees produce good fruit.

Unaccountable is the fact that farmers living on the same farms twenty, perhaps fifty years, have not set out a tree except an occasional shrub, pear, cherry or quince tree, remaining on the same farm long enough to grow an orchard that might yield every year more than the farm could produce.

There ought to be an arbor day or several arbor days on every farm every spring and fall. But if you cannot or will not set out a tree, drop seeds. Better a tree with nubbin fruit than no tree and no fruit.

GEORGE APPLETON.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

EFFECTS OF SPRAYING APPLE-TREES

In the report of W. M. Orr, the superintendent of Canadian spraying experiments, is cited the effects of spraying apple-trees with Bordeaux mixture, in 1898: Snow, sprayed, 64 per cent clean; unsprayed, one per cent clean. Ben Davis, sprayed, 100 per cent clean; unsprayed, 28 per cent clean. Wagener, sprayed, 96 per cent clean; unsprayed, 9 per cent clean. Spy, sprayed, 100 per cent clean; unsprayed, 36 per cent clean. Greening, sprayed, 88 per cent clean; unsprayed, 24 per cent clean. Ribston Pippin, sprayed, 90 per cent clean; unsprayed, 80 per cent clean. Canada Red, sprayed, 72 per cent clean; unsprayed, no clean fruit. This orchard had never been sprayed before.

The effect on the foliage was plainly noticeable all season. The leaves were fresh and had that glossy appearance which indicates growth. The bark was smooth, and looked like the bark of young trees, the moss and roughness on the bark almost entirely disappearing, and the trees have made more new wood than for several years past. The fruit was on the sprayed trees as nearly perfect as it is reasonable to look for. The Bordeaux mixture used was made as follows: Copper sulphate, four pounds; fresh lime, four pounds; water, forty gallons. To this in every case were added four ounces of Paris green. On account of the law which forbids the spraying of fruit-trees when in full bloom, and on account of rain, many applications were lost.

INQUIRIES ANSWERED

Injured Pear Foliage.—C. E. W., Bellefont, Pa. The injury which you describe may result from various causes. It would help me very much in determining what has caused it if you would send me specimens of the injured parts for examination. Such injury might be due to insects or fungus diseases.

Grapes Dropping Off.—M. E. A., Warsaw, Va. I think probably that your grapes are destroyed by some disease, and it can be prevented by spraying with Bordeaux mixture immediately after the fruit has set, and twice thereafter at intervals of about three weeks, and afterward spray once or twice with the ammoniacal carbonate of copper.

Resetting Blackcap Raspberries.—D. B., Uniouville, Mo. Blackcap raspberries may be reset in the fall without injury provided the work is carefully done; the tops should be cut back severely, and on the approach of winter they should be ridged up, covering the crowns about six inches. If a little mulch is added, so much the better. This applies to old plants and not to newly rooted layers, which are very tender, and if set in the fall are quite apt to be winter-killed. The tops of old plants should be cut back so that they will not be over twelve inches high when planted out.

Wrapping Trees—Mulch of Castor-bean Hulls.—M. A. L., Floyd, Okla., writes: "I want to know if leaving my young apple orchard wrapped up all summer will injure trees.——What is thought of a mulch of castor-bean hulls?"

REPLY:—By wrappings around trees I take it you mean coverings to protect the trunks from sun-scald. In Minnesota, where sun-scald of the trunks and lower branches of box-elder, soft and hard maple or basswood, as well as of apple-trees, is common it has been found that the wraps have done no apparent harm when left on the trees all summer. Of course, they form convenient places for the larvae of the codling-moth to "spin up," and may thus be used as traps for them. In some experiments made the trunks were surrounded with boxes filled with soil, and no harm resulted from leaving them in place all summer.——Castor-bean hulls will make a fairly satisfactory mulch for trees and bush fruits.

Red Rust.—J. D. H., Oklahoma. The specimen leaf of blackberry received from you is covered with what is known as red rust. This disease also attacks the blackcap raspberry, and may be very destructive. Some varieties are much more liable to injury from it than others. The old Kittatinny blackberry was discarded from many sections on account of its susceptibility to this disease, and has been replaced by the Snyder, which is less liable to it. The only practical remedy which has been discovered is digging and burning the infested plants. These can be told even before red rust appears on the leaves. On infested plants the leaves are smaller and have a pale green color that easily distinguishes them from those that are healthy. It is possible that spraying with Bordeaux mixture will prevent infection, but there is no prospect that anything you can apply will check the disease among your plants. I am very sorry I cannot give you more encouragement.

Phylloxera.—G. W. B. Vines that are grown from cuttings are just as liable to have their roots diseased as those that are grown from layers. After they are established there is practically no difference between them, since in either case they are but rooted pieces of the parent plant. But some varieties of grapes, for instance, the European sorts, are so liable to injury from the American grape-root louse, known as the phylloxera, that they cannot be successfully grown on their own roots in this country east of the Rocky mountains, but must be grafted on our native river grape or other native sorts. This root-louse was introduced into European vineyards over twenty years ago, and has finally become so abundant as to make it necessary for the French vineyardists to graft their vines on American roots. The same is true of parts of California, where it is now regarded as unsafe to depend on European grapes that are on their own roots, for the phylloxera has reached that favored section. There are other injuries that may affect our grape-vine roots, but this is the most common.

Irrigating Orchards.—R. A. W., Finlow, W. Va. If your soil is not well adapted to fruit I have but little faith that you will make any great success of fruit-trees by irrigating. I think that by continuous cultivation, so as to keep a dust blanket on the land four inches deep, and by occasional plowing in a crop of cow-peas or crimson clover, that you would seldom need to irrigate. But there will undoubtedly be times when you could use irrigation to good advantage if you had convenient arrangements for it. I doubt very much about your being able to irrigate thirty acres satisfactorily direct from the ram, and think it would be necessary to put in a storage reservoir in order to irrigate successfully. To sum up the matter, I do not think it will pay to irrigate for winter fruit-trees in your section, since you are very certain of good crops on good fruit land when kept properly cultivated. I do not think you would get the water fast enough from a ram to make it practicable to irrigate thirty acres with it, unless you had a storage reservoir. I know of no real first-class work on irrigation adapted to your conditions, but think you had better get the following publications from the United States Department of Agriculture, Washington, D. C.: Farmer's Bulletin No. 46, being on Irrigation in Humid Climates. Water Supply and Irrigation, papers No 1. Notes on Irrigation in Connecticut and New Jersey, it being Bulletin No. 36, of office of experiment stations.

THE POULTRY-YARD

Conducted by P. H. JACOBS,
HAMMONTON, NEW JERSEY

FRUIT-GROWING AND POULTRY-RAISING

A FRUIT-FARM upon which is grown small fruits may not offer very tempting inducements in the way of keeping poultry, but if it be considered that while a limited period of the year is devoted to bearing and ripening fruit quite a long interval interveues from the ending of one season to the beginning of another, and this interval opens the way for the occupancy of the ground devoted to vines by poultry. It is true that poultry will completely destroy the blossoms and ripening fruit that they cau reach, and at such periods the range to them of the fruit-patches is not available, and the matter should therefore be systematized a little. Let us examine a fruit-farm upon which are grown strawberries, raspberries, blackberries, apples, peaches, pears, grapes or any other fruit. In the first place no sensible fruit-grower will expect good results unless he has his orchards of standard trees free from the intrusion of small varieties. The orchard is therefore vacaut so far as the land is concerned; that is, it is occupied only above the reach of fowls. If partition fences be made, which can be cheaply done of lath, fowls can have the run of the orchard without hindrance in any manner to the growing fruit. The fowls are beneficial rather than injurious. Strawberries come into bearing sooner than other fruits and therefore are soonest gathered. When the crop is off let the poultry in. This gives them a fresh range. Cultivation of the berries may still be done, for the freshly turned earth will be only the more inviting. Next in season will be raspberries, then blackberries. Into each field in turn the fowls may be allowed to go, and the occasional change from one field to another will be the means of securing more eggs and healthier poultry. The orchard is then still ready for them at any time, and by taking advantage of all the circumstances a poultry and fruit farm may be combined. No business man who is in possession of two or more floors of a building thiuks for a moment of losing the space gained from the upper stories, nor should the fruit-grower allow the land to be useless while the trees are bearing or idle. Fowls do not deprive the land of anything, nor do they require any more care in the orchard than when located elsewhere, but they keep industriously at work in the endeavor to catch insects, both on the trunks of trees, among the vines, from the cultivated ground and amid the grass and stubble. Nor is this all. Their droppings serve as manure, enriching the soil and feeding the growing trees, the distribution of the manure being done by the fowls themselves during their constant ramblings. The proper utilization of fruit-farms may be carried further, for bees should be included. They would not only secure and store away honey, but assist in the matter of fertilizing the blossoms. It is to the economical applieation of every pursuit possible on a fruit-farm that we desire to attract attention. Three crops—fruit, poultry, eggs and honey—may be raised without either of them being brought in conflict with the other. A good, well-managed flock of fowls will easily pay all the expenses incurred in an orchard, and considering that they require no extra space, are sure to prove profitable.

FEEDING PROPER MATERIALS

To take a view of the matter of feeding we may well consider the purposes in view. Eggs, of course, are what all are striving for, and one must feed for them. Corn will not do so, as it is too fattening, and hens cannot lay on food rich in carbon if the food is deficient in nitrogen and phosphates. It is an utter impossibility for hens to lay when fed on corn and nothing else. True, they do lay on most farms, more or less, on a corn diet, but they pick up food by foraging. What is intended here to imply is that fowls if deprived of liberty and fed on corn alone cannot produce eggs for a great length of time, because complete egg material will not be present. Even when running at large they do not lay well on corn, nor will they give satisfaction. An egg contains a quantity of carbon, which is stored up in the yolk, but the white is composed almost exclusively of albumen, a nitrogenous compound. There is also stored in the egg phosphorus, in the shape of phosphoric acid (as phosphates), and other combinations, all of which materials serve to furnish flesh, bone and feathers for the chick should it undergo the process of incubation. As corn furnishes material for the yolk, an excess of such food produces fat, and this interferes with the laying qualities by inducing disease of the organs of reproduction. To obviate this one should give a variety of food, and nothing is so conducive to health and laying as clover. Clover is rich in nitrogen, in the shape of vegetable albumen, and it is almost necessary at all seasons.

SUMMER HINTS

There is nothing so cheap or effective as air-slaked lime in keeping the premises in good sanitary condition. Liberal use of it will always be beneficial. It is generally conceded that it is not a good plan to give more food than the chicks will, at each meal, quickly partake of with keen relish. While this is very true, generally speaking, there will be no harm done by having a feed-trough in a cool, shady place every other day filled with cracked corn, so the chicks that are ten weeks old and more may have access to it at will, if they are to be fatted for market. They will not partake of it too freely, and often the treat will be just to their liking and precisely what they need to form a properly balanced ration for the day. The dust-bath for the flock is now especially needed, and freshly spaded earth where there is ample shade also will afford the flock beneficial enjoyment. Dust and grease are the natural enemies in keeping in check vermin that infest poultry. During the warm months it requires every method and effort known to overcome vermin in the poultry-yard. Neglect quickly tells and increases the trouble, making more than twice the work to do what should first have been done properly.

FARMERS AND THE SUPPLY

Large numbers of chickens, ducks, geese and turkeys are constantly required to satisfy the market demands of the United States, and surely this branch of the business is conducted to no great extent, nor is this supply furnished by the class of modern fowl fanciers. The farmers are the people who auswer this call, and those who have followed up the business in a regular but moderate way all their lives, raising but a few dozen or scores of birds perhaps annually, in most cases are the class of poultry-breeders who supply our people and markets with this desirable food, and with the eggs eaten in the aggregate. Our fanciers are a very useful adjunct in the profession, enterprising and wide-spread class of workers for the advancement in the good quality of Americau poultry that has obtained a place among us in the last half-century, but to farmers we must look for this supply of poultry and eggs.

GOOD PRICES FOR DUCKLINGS

The season for spring ducks has opeued, and the quotations the first week in May were twenty-five cents a pound, and they even now bring good prices. What is termed "spring ducks" are ducks of this year's hatch and which weigh about three or four pounds each, or about seven pounds a pair, though they are frequently sent to market weighing nine or ten pounds a pair. It ought to pay to raise early ducks when one can get over two dollars a pair for them, especially as the cost of food to produce a pound of duck meat does not exceed six cents.

NOTES FROM CORRESPONDENCE

COST OF THE FEED.—I saw on page seven of your May 15th issue that "L. H. H.," East Rochester, Ohio, started with 80 Plymouth Rock hens in 1888, sold eggs and chickens to the amount of $94.07, and the feed cost him for old and young chickens $21.95, leaving a profit of $72.12. I started with about the same number in March, 1899. I have 32 Plymouth Rocks. The rest are White and Brown Leghorns, White Wyandottes and a few mixed. I have them separated in six flocks in rather small yards; they are doing well. Last month I got $10.38 for eggs. This month I may not get much more than half that amount because I have set a number and half of the rest want to sit. But they cost me nearly $6 a month. I feed wheat, corn, middlings and bran. I would like to know how to keep 80 Plymouth Rock hens for $21.95 a year. Does he have a run for them? What does he feed? How many cockerels does he keep for 80 hens? Are they all in one flock?

Bangor, Pa. A. B.

RECORD OF A SMALL FLOCK.—I am a subscriber to the FARM AND FIRESIDE and I like it very much. I am interested in poultry and want to give you a little account of the experience I had with hens. The first of April I had five hens to lay, and I set one the 13th and they laid just 100 eggs from April 7th to May 7th. My hens are Plymouth Rocks and are working fine. I fed them wheat, bran, corn-meal, ground oats and table scraps.

Eddytown, N. Y. B. W.

A YEAR'S RECORD.—I will state what I did with my chickens in one year, 1898. I commenced with 175 hens, sold 9,252 eggs, which brought me $72.15, none at fancy prices. I set 824 eggs, hatched 347 chickens, used about 30 on the table and sold 116, which brought me $24.30. I kept no account of what the eggs we ate (four in the family) cost, but we had all the eggs we wanted. I know this is not well for hatching, as I have done better, but I used an incubator, operating it twice with 400 eggs, and only 90 chicks hatched, but I think it was partly my fault. The eggs were mostly from Black Minorca hens.

Buffalo, Ind. H. M. M.

LEAD-POISONING.—Some years ago a hen squalling and fluttering as if in the clutches of a hawk was seen in the yard. She seemed unable to use her wings, and died in a few days. On examination there was no mark of injury externally, but a pistol-ball of conical shape was found in her gizzard. Since then a number of fowls have been noticed affected with something that caused them to droop, turn pale and lose the use of their wings and legs, more or less. If they live many days the breast wastes away and their necks appear curved more than usual. Almost invariably either shot or fragments of lead were found in the gizzard. My rule for some years has been to kill them when they manifest symptoms of this sort, as I did not have time to try what effect remedies might have. White lead and other paints containing lead probably poison fowls by being carelessly introduced in their food, and rain-water drank from leaden vessels may have the same effect. C. G. W.

Whitesville, N. C.

INQUIRIES ANSWERED

Lameness of Ducks.—B. W., New Middletown, Ohio, writes: "One of my drakes became lame last winter and another has now become lame. What is the remedy?"

REPLY:—Turn the ducks on a grass-plot, giving no food except that secured by them in foraging, as the difficulty is probably due to overfeeding.

Cross-breds.—H. D., West Fairlee, Vt., writes: "What would be the result of a cross with Brown Leghorn hens and Black Spanish male? Would it improve their laying qualities?"

REPLY:—Nothing is gained by crossing, as it destroys the characteristics of both breeds, the offspring being inferior to the parents.

Rape for Fowls.—R. H. M., Lakeville, N. Y., writes: "I noticed an article in regard to dwarf Essex rape for fowls. Can it be fed to fowls in winter, and how is it harvested?"

REPLY:—It belongs to the cabbage family and is relished by fowls. It remains well into the frost period and may be cut and chopped for the fowls at any time.

Eggs Not Hatching.—J. A. M., Bluff Springs, Ill., writes: "I have six hens and one cockerel. They are in a pen seventy-five feet square, are fed oats, corn and shells. The cockerel is last year's hatch. The eggs do not hatch."

REPLY:—It is probably due to the exclusive grain diet. Lessen the quantity and vary with meat and green food.

Picking Feathers.—L. A. G., Canon City, Colo., writes: "What is the cause and cure of hens picking each other and eating the feathers?"

REPLY:—It is an acquired vice, due usually to overfeeding and idleness. Such flocks are unprofitable. The only cure is to separate them or use some mechanical contrivance, such as a poultry-bit. Frequently the fowls are smeared with some disagreeable substance such as tar.

Liquid Paint.—A. T., New Boston, Mich., writes: "Can you give a receipt for making liquid paint to apply to the roosts so as to destroy mites and lice?"

REPLY:—The "liquid paints" on the market are proprietary articles, but are nearly as cheap as any that can be made. The kerosene emulsion (adding a gill of crude carbolic acid to a quart of the creamy emulsion) is excellent. Pure kerosene is also efficacious. A pound of naphthalene dissolved in a gallon of kerosene is used by some.

Preserving Eggs for Winter.—R. N. B., Middletown, N. Y., writes: "Please give a good method of preserving eggs for winter."

REPLY:—The main point is to use only eggs from hens not with males, as such eggs will keep three times as long as those containing the germs of chicks, and the hens will lay as many eggs when no males are present as when with them. The following are the rules to observe: 1. Use eggs from hens not with males. 2. Keep the eggs in as cool a place as possible. 3. Turn them three times a week. 4. Keep them on racks or in boxes. 5. No solutions are necessary.

A FARMER'S OUTING

[CONTINUED FROM FIRST PAGE]

outside of the tent door and keeps through the dark hours a ceaseless vigil. Occasionally there is a low growl or a sharp, angry bark, for over the hills there are coyotes lurking. The horses continue to graze not far from the tent, and from time to time send forth a loud snort or stamp the ground. The cow announces her presence by an occasional explosive puff from her nostrils or a low moo; all of which night signals have a familiar and friendly sound to the occupants of the tent whenever they momentarily wake from their slumbers.

In the morning all awake fresh and reinvigorated and the journey is continued farther and farther into the great labyrinth of hills. For days they may wind through valleys and over hills that give them from time to time an expansive view of the surrounding country, the lower hills and the far stretch of plains to the eastward, and the great snowy ranges to the westward. There are long pleasant days upon the road or in camp, in some picturesque valley, and at the end of the outing all return gladly homeward; and when the home and farm are reached the toilers take up their various burdens again with light and cheerful hearts.

TROUT-FISHING IN THE ROCKIES

SUMMER-PRUNED RASPBERRIES

It is a common practice among raspberry-growers to pinch back the growing canes in order to force the development of laterals for fruit production. The wisdom of this practice having been doubted, two series of experiments independent of one another were conducted in order to prove the matter. It was found that the following effects were true alike of both red and blackcap varieties.

The stumps in the pruned row were more numerous than in the unpruned, and most numerous where not only the canes but the laterals had been pinched back. As might have been expected from this and from the well-known fact that the larger the number of canes the poorer (as a rule) the fruit, the yield was actually less where the canes were pinched back and least where both canes and laterals were pruned.

The raspberry is peculiar in that the canes die back almost to the root-crown and are sloughed off there; the lower portion not only lives, but gives rise to the new canes. Therefore, since the young canes are really branches and come from buds in the same manner as the laterals higher up the stem, pinching the top would naturally tend to increase them by stimulating the buds from which they spring.

It seems best from these two series of experiments to avoid excessive summer pinching and to rely upon thinning the stems to a small number in order that the number of fruiting canes many not increase to such an extent that the development of a good crop might be prevented. M. G. KAINS.

REMEDY FOR SAN JOSE SCALE

I notice that in the May 1st issue of the FARM AND FIRESIDE that the "lime, salt and sulphur wash" so extensively used against the San Jose scale in California is recommended for use generally. As before stated, in California this wash is largely and successfully used, but in the East it has very rarely been used with any degree of success. Both this and the resin washes, also used in the West, kill the scale-insects by forming a thin, varnish-like coating over the scales, so that the young are unable to disengage themselves from the parent scale or are killed by the caustic properties of the coating. In those parts of California where these washes are used no rain falls for several months, so that a sufficient period elapses during that time to prove fatal to the scales. But here in the East, where the atmosphere is much more moist, it would be hardly more than a couple of days before the caustic properties of these washes would be destroyed.

The best remedy yet devised for use in the East is whale-oil soap. Two pounds of this should be dissolved in hot water, and it should be sprayed on the tree at this rate while still warm, applying it in winter while the tree is dormant. There is no doubt about this killing the scale, as the caustic potash in the soap eats through the scale-covering and then with the oil proves fatal to the insect beneath. The only point to be carefully observed is to be sure that the whole tree is thoroughly covered. Be sure and get the best grade of potash soap; that made with soda is not so uniform in quality or as effectual. The kerosene and water mixture now used against all sucking insects is also fatal to the scale when applied strong enough, but the exact strength at which it may be applied has not yet been determined.

E. DWIGHT SANDERSON.

EXTRACTS FROM CORRESPONDENCE

FROM IDAHO.—The farmers on Camas prairie are going to harvest a large crop this year. During a warm spell in January quite a lot of ground was plowed and some grain sown. This town is the county-seat and is hooked as the terminus of two railroads this summer. The farmers are jubilant over the prospects of high prices for everything and big crops in prospect. Land that went begging for buyers a year ago cannot be had now at any price. Yet there is still considerable non-resident land for sale reasonable—from $5 to $15 an acre. The whole Northwest is wild over the greatest mining camps discovered since the days of '49. By August 1st there will be no less than twenty thousand miners and prospectors at work in the mountains adjoining this prairie, and that will give sale for all that we can produce at good figures. This big mining camp is forty miles from Mount Idaho. There are good openings around the foot-hills for fruit-raisers and gardeners to get homes for from $1,000 to $1,500. There is the best opening here for a creamery: no opposition, and tons of butter can be sold. We do not irrigate here, and we raise from thirty to forty bushels of wheat to the acre. It is a good fruit country. I tried to get an Eastern man to start a blacksmith-shop here last fall, but couldn't, so a local workman opened up and is making $100 a month. Other enterprises would pay as well. People here think of nothing but gold-mines. W. T. F.

Mount Idaho, Idaho.

FROM ILLINOIS.—Farmers of Jefferson county are in a fairly prosperous condition. The crops last year were generally good, and prices for farm products satisfactory with a few exceptions. Corn averaged thirty bushels to the acre, many fields producing forty to fifty bushels. Hay is worth now $6 to $7 a ton; oats, twenty-five cents a bushel; corn, thirty to thirty-five cents. Butter sells to stores in Mt. Vernon at fifteen cents a pound, and eggs at ten cents a dozen. Hogs are worth three to three and one half cents a pound on foot. Milk-cows sell at $30 apiece. Many farms have changed hands within the past six months, owing to much immigration from northern and central Illinois to our locality. Some unimproved land can still be had at from $5 to $10 an acre. Improved farms are selling at from $15 to $50 an acre. We welcome all upright and industrious people. This is a great fruit country. Indications are for a full crop of apples this season, but peaches were killed by extreme cold last winter.

Mt. Vernon, Ill. D. Z. A.

QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Cabbage-maggot — Correction. — The remedy for cabbage-maggot given to R. A. B., Lisbon, Ohio, in June 1st issue should read: "Dissolve one pint of salt in two and one half gallons of water. Pour one half pint around the roots of each cabbage-plant."

Ground-cherries.—Mrs. J. H. M., of Pulaski county, Ind., writes: "Tell me what to do to keep my ground-cherries from falling off. Something stings them and they all fall off. I have both the purple and yellow kind."

REPLY BY T. GREINER:—It is the nature of the plant to drop the fruit when ripe. I know of no insect that stings the fruit.

Trouble with Rhubarb-stalks.—J. W. H., of Merrillville, Cal., writes: "Can you tell me what ails my pie-plant? In the fiber of the stalk, midway or below, the fiber crinkles up and bursts the skin and then looks all shredded and torn. Is it because the season is unusually cold?"

REPLY:—Can any of our readers suggest cause and remedy?

Sowing Clover in the Summer.—A. B., Olds, Mich., writes: "I will give my experience in sowing clover in the summer, at the last plowing of the corn. I sowed the seed each day after cultivation. The ground was sandy, moist and in good condition. The clover came up quickly, got a good start before winter set in, and made a heavy growth the next season. It was plowed under and the ground sown in wheat, which made a yield of twenty-two bushels to the acre."

Mildew on Late Peas.—H. L., Millersburg, Ohio. I do not know of any successful attempts to treat the mildew which so generally injures the late peas. The ammoniated carbonate of copper solution would be good, but it would probably fail to stick to the vines. However, if a little soap or molasses were added it would probably overcome this trouble. I think that Fostite powder might be a good thing to use. Bordeaux mixture would undoubtedly prevent the injury, but it would stick to the pods and make them unsalable, but for home use it would probably be the best thing to use and would give good results.—S. B. GREEN.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Flexor Tendon Gall.—C. F., Chester, Idaho. Please consult answer given to H. S. H., Miller School, Va., in issue of June 15th.

So-called Thumps in Pigs.—C. W. O., Geneseo, Ill. So-called thumps in pigs, in most cases at least, are nothing more nor less than a frequent and usually fatal symptom of swine-plague, or so-called hog-cholera. It is therefore to be presumed that it is the latter disease that ails your shoats.

Warbles.—J. H., Phelps, N. Y. What you describe are so-called warbles, produced by the larvae of the gad-fly (Oestrus bovis), but by the time this reaches you the larvae will have escaped, the swellings will have disappeared, and the little round holes will have healed. See answers headed "warbles" in recent numbers of this paper.

Has Milk Before Calving.—J. W., Middleton, Oreg. It is not very uncommon that heifers going with their first calf have at times a little milk in the udder several weeks before calving. In my opinion and experience it is best to leave them alone and not to touch their udder before the proper time. I think it would have been better if you had left her alone and had not tried to milk her.

Crippled Hogs.—B. W. L., Altoona, Kan. An affection of the feet and of the lower joints is often a conspicuous symptom of swine-plague, and then usually attended with more or less ulceration. If, however, the latter is absent it may be a case of rhachitis, caused by an unsuitable diet or by food lacking sufficient quantities of lime salts and phosphates or by (sloppy) food too rich in acids. If you had considered it worth while to give a more explicit description of your case I might have been able to give you a more satisfactory answer.

A Tumor and Lame.—T. A. McA., Angelica, Wis. I have my doubts whether there is any casual connection between the lameness and the large dangling tumor on the breast of the horse. The latter, it seems to me, can be removed only by a surgical operation, and the former surely must first be located and its nature and causes ascertained before any treatment can be prescribed.

Distemper.—C. W. McF., Lumberton, N. J. If your horse suffers from (now chronic) distemper, the same, above all, needs rest, should be exempted from all kinds of work and be treated by a competent veterinarian until a recovery has been effected. If this is neglected and you continue to employ the animal in "heavy pulling," the horse possibly may survive, but will soon be past recovery and be worthless.

Looks Like Tuberculosis.—E. M., Kinzua, Pa. The case you describe looks like it might be tuberculosis. I advise you to have the tuberculin test applied not only to the cow that lost her calf and is coughing, but also to all other cows you may happen to have, because where there is one case in a herd there are usually more. There will be no difficulty to have it applied in your state. If you do not know any veterinarian in your neighborhood who can do it, write your state veterinarian, Dr. Pearson, and he will tell you.

Cut a Part of the Hoof Off.—S. C. S., Jefferson, Ohio. Loose or separated horn will never again unite with the fleshy parts beneath, and therefore must be removed with a sharp hoof-knife. If this is not promptly done the loose horn will interfere with the growth of the new horn. To prevent the latter to become morbid and to grow out of shape strict cleanliness and a good, well-applied bandage is necessary. I advise you, particularly since your mare is a valuable one, to call on your local veterinarian and let him attend to her.

Crippled.—E. T. P., Wyoming, Wis. The wording of your inquiry leaves it in doubt whether your two sows or their young pigs are crippled. If it is the former it is probable that a grossly defective diet combined with the increased draft upon the resources of the organism, caused by the nursing of the pigs, constitutes the cause. If it is not yet too late, feed food rich in phosphates, lime salts and nitrogenous compounds, and avoid feeding sour slops and any food rich in acids. Good and fresh clover and ground oats will be in order. Also see answer to B. W. L., Altoona, Kan., in present issue.

Osteoporosis.—H. B., Blountstown, Fla. Osteoporosis, or so-called big-head, in most cases at least, is nothing more nor less than actinomycosis in a jaw-bone, and must be considered as incurable if the bone is already honeycombed. It is claimed by certain parties that iodide of potassium given internally for a long time will effect a cure. It may be that it will do so, or cause some improvement, if the disease (or the morbid process) is yet in its incipient stage, but the damage done by the continued use of the iodide of potassium to the animal organism also must be taken into consideration, and the expense is another item.

Foul Sheath.—A. V. D. B., Green Bay, Wis. In "foul sheath," as a rule, the horse urinates in the sheath. The urine in constant contact with the secretions of the inner membrane of the sheath soon decomposes and assumes corrosive properties. Thus the membrane will be attacked and become sore, swelled and ulcerating, and as a consequence the stricture in the sheath will increase, making the evil worse. It is, therefore, seldom sufficient to cleanse the parts with soap and warm water, and then disinfect the same with a mild antiseptic, unless the stricture at the same time is removed by means of a surgical operation, which to describe will not be necessary, as it has to be performed by a veterinarian, who will know how to proceed.

"Teaswater" (?)—M. S. H., Parr, Va. May it be that your neighbors (you say every one) who say that your calf has "teaswater," and try to make you believe that your fine and healthy calf is sick because it is a little "hunchy" (has a layer of fat on each side of the rump, or more probably, on the hips and the ischiadic tuberosities), are practical jokers? At any rate I never heard of, nor do I know of any "teaswater" disease. Or may it be that your good neighbors simply wished to impress upon you their superior knowledge by telling you that your calf shows a descent of the old celebrated "Teeswater" breed, one of the principal progenitors of the present Shorthorn breed of cattle? Perhaps the latter supposition is the most probable.

Chorea.—I. R. O., Pittstown, N. J. What you describe is a case of chorea, or St. Vitus' dance, and a result of the distemper from which your dog suffered two years ago, and from which the same never fully recovered. Since it is of long standing and gradually getting worse the prospect of ultimate recovery is exceedingly slim. The seat of the morbid changes is in the nervous system. Although the treatment applied by your veterinarian did not affect any improvement, it was in conformity with the recommendations of good authorities. If you desire to make another trial, you may give your dog, which you say is a beagle, and consequently not a large animal, once a day from ten to twelve drops of Fowler's solution or use the following prescription: Liquoris potassii arsenicosi and aquae cinnamomi ana. drachm iv. Daily ten to twelve drops. But do not expect too much.

Legs Bruised and Swelled.—M. D. McC., Neff's Mills, Pa. If you had made continuous applications of cold water immediately after the bruising took place you would have prevented most of the swelling, and the legs very likely would have presented a normal appearance before this. For this treatment, however, it is too late now. If there are no sores, allow your mare voluntary exercise during the day and give the swelled legs a good rubbing (with the hand) every evening; after the rubbing bandage the swelled legs from downward upward with a woollen bandage, remove the bandage in the morning, and then before the mare is turned out to take her voluntary exercise have the legs rubbed again the same as in the evening. Repeat this treatment every day until either all the swelling has disappeared or until no more decrease can be effected.

Sore Hip.—J. S., Oshorn, Ohio. If the destruction or loss of the skin on the hip of your cow is extensive, it will never be replaced by skin tissue, because lost skin is not and cannot be renewed, and in that case the sore can only heal by becoming coated with scar-tissue. It is different if the loss is not extensive, for then the incipient scar-tissue, uniting with the edges of the skin, will gradually contract and thus draw the somewhat elastic skin covering the surrounding parts sufficiently together to cover the place where the skin has been destroyed or lost, and then the ultimately remaining scar may be small enough to be inconspicuous. If you keep the sore clean, prevent any irritation and keep it aseptic by applying, say twice a day, a little boric acid or some other mild antiseptic the healing process will be attended to by nature; but if the sore is a large one, and particularly if irritation is not prevented, it may take some time before it will become firmly coated with scar-tissue.

Hogs Itching.—W. N., Lucton, Kan. Without any further information I cannot tell you what constitutes the cause of the itching. It may be that your hogs are lousy, and it is also possible that they are affected with mange, but as that is not a frequent disease among hogs, it is more likely that it is extreme lousiness, something which you can easily find out yourself. If you find them to be lousy, wash every one in a thorough manner first with soap and warm water, and then with a five-per-cent solution of creolin in water, but every one, as soon as it has been washed, must at once be taken to clean quarters free from lice and nits. Then as soon as all have been washed, the old quarters must be thoroughly cleaned and disinfected or freed from all lice and nits. In about five days the whole herd must be washed again in the same way, and as soon as washed be transferred to the old quarters. If all the washing and cleaning has been done in a thorough manner, so that no lice and no nits have escaped destruction, two washings will be enough. If not, a third and maybe a fourth have to follow.

Lame.—M. A. G., Gretna, Ohio. You say you suppose that your horse is lame in the shoulder, but give no reason whatever in support of your supposition. The fact that the muscles of the shoulder began to shrink two weeks ago does not indicate anything except that the horse has been very lame for some length of time and that the muscles, in consequence, have been more or less inactive. If you examine closely you will find that the muscles lower down are shrinking, too, but that the shrinking of the muscles surrounding the leg is less conspicuous than in the shrinking of the flat muscles covering the shoulder-blade. You can easily ascertain the facts by measuring the circumference of both legs at the same places. Such a shrinking (atrophy) of the muscles takes place no matter where the seat of the lameness may be, and is usually the most conspicuous if the seat of the lameness is in the foot, because there it is apt to cause the most pain. Give your horse strict rest, have him examined by a veterinarian, and do not apply any treatment until the seat of the lameness has been found and the nature of the same has been ascertained.

Tuberculosis.—A. B., Naolt, Tenn. Of course, it is possible that you may have poured the medicine into the lungs of your cow when you drenched her, and thus caused foreign-body pneumonia, which would become fatal if the medicines poured into the lungs contained insoluble powders, but if this really happened the cow would hardly have lived two weeks after the drenching. Besides this, it must be supposed that she was already sick when drenched, because animals are seldom treated to a dose of medicine unless they are sick. Concerning your other questions, allow me to remark that tuberculosis is a very insidious disease as well in animals as in human beings, and a calf becoming infected with the milk of its dam, unless the milk is teeming with the tubercle bacilli, will seldom show symptoms of disease before the same is one, three or four years' old. To describe all the symptoms possible in tuberculosis would do no good to anybody unless the description is a complete and an exhaustive one, and to give such a description is prohibited by want of space. It is dangerous to use the milk of tuberculous cows unless the milk is heated first up to the boiling-point. Unless your "cow doctor" is familiar with the morbid changes produced by tuberculosis he would be very apt to mistake the latter disease for pneumonia.

WHICH AND T'OTHER

By Maude Morrison Huey

AIN'T thinkin' o' goin' over t' the celebration this afternoon, be ye, Job?" Aunt Phoebe held the dish-cloth swaddled about several undried forks stiffly aloof in one red and water-soaked hand, while she eyed Uncle Job with sharp curiosity. He was selecting, with some hesitation, a hat from the long row of ancient and decrepit head-gear that adorned the nails behind the kitchen door. His hesitancy roused Aunt Phoebe's suspicions.

His usual every-day affair, a battered straw with a blue gingham patch, hung in close proximity, but was passed over slightingly. He took down his second-best, a brown felt with a dejected rim, and smoothed it into shape.

"I'm hard up for top-riggin', Phoebe," he remarked, with disguising nonchalance, denting an imposing crease in the flimsy brown crown, and twirling it about inspectively on his forefinger.

"What's the matter with your straw? I don't see nothin' the matter with it," questioned Aunt Phoebe, suspiciously. "Is that patch ripped loose ag'in?"

"No," was the reluctant admission; "that patch is all right; but you see, my hair's got so all-fired long that old straw won't more'n half hold it. I thought this brown felt would mebbe stick on better." He ran his clumsy fingers through his gray mop with a meditative air.

"Must be it's growed considerable since yisterday. Your hat seemed t' be sufficient then, I noticed, Job," rejoined Aunt Phoebe, with dry curtness.

Uncle Job seemed suddenly to have gotten some pepper up his nose, or a whiff of Scotch snuff, for he began a vigorous course of sneezing and coughing that quite drowned the curtness of Aunt Phoebe's remarks. Of course, no reply could be expected. When once more his internal equilibrium had been restored he turned an innocent face to front his accuser.

Aunt Phoebe had resumed her task of drying the dinner dishes, none too gently. The knives and forks, as they tumbled down in a hurried heap to the bottom of the knife-box, rattled in sharp accordance to her disturbed temper.

"Have you seen anything o' the Paris-green pail, ma?" asked Uncle Job, meekly. He always called her "ma" when he felt a softening influence was necessary; now he accompanied it with a smile of good-humor.

Aunt Phoebe's face relaxed. "Seems t' me I see it hangin' out 'longside the wood-house. Why, do you think o' usin' it, Joh?" She was polishing the surface of the plain glass water-pitcher and did not see the twinkle in Uncle Job's eyes as he replied:

"Yes; I guess I might 'bout 's well pass my time a-huggin', seein' I can't go to the Fourth o' July, nor nothin'. You shouldn't be s' fetch-taked hard on a feller, Phoebe." He pulled the brown hat down securely about his ears, and peeped slyly into the round looking-glass that hung suspended over the wash-bench.

"Who said anything 'bout your not goin', Joh Jenkins, I'd like t' have you tell? Go if you want to, an' I hope t' goodness you'll enjoy yourself. The 'tater-bugs is a-gnawin' ever' last leaf from the vines, an' the weeds in the corn-field is a-lookin' real promisin', I should say, for a fine crop; but you needn't mind little things like that. Jest put on your duds an' traipse t' Fourth o' July doin's, I would."

She finished her spirited remarks with an energetic flourish of the dish-cloth and a bang of the glass pitcher, as she placed it upon the white oil-clothed table, that threatened to remove the bottom.

"There, there, ma! don't git your Irish up! Didn't I say I's goin' to hug?" His hand was holding the door-latch upraised hesitatingly. "Where'd you say the pail was?" he questioned, absently, as he stepped out upon the narrow back porch, stumbling awkwardly over the corn-husk mat Aunt Phoebe always kept outside the door to "catch the tracks," but which succeeded more often in catching Uncle Job's clumsy cow-hide boots. "Pesk take the thing," he said, which speech he found most applicable to corn-husk mats of the many he had experimented with.

Then he went down to the bottom step and stood a moment, staring mechanically out over the July fields, where billows of green rippled responsively to the soft touches of the breeze. Over yonder a patch of freshly plowed ground lay darkly against the rustling greenness of the woods.

"I don't know as they'll have much of a time, after all," he mused, half regretfully. "There won't prob'ly be many doin's. Mebbe the Dempster band'll be down, an' I heard the Rodney band counted on comin'. They'll prob'ly have some sort o' parade, an' mebbe some racin'; it's hard t' tell."

He stood reflectively looking into the distance and listening to the energetic rattle of dishes in the kitchen.

"I don't know but it's 'bout as well, though," he concluded, as he walked away in the direction of the shed. "If ma'd 'a' went over she'd been sure t' e't some pink taffy; an' if there's anything in this world that upsets ma's nerves, it's pink taffy. She allus will eat it, though, if it's in sight, in spite o' all warnin's. Ther' don't seem t' be s' much temptation any other day but the Fourth o' July, with a candy-store ever' other corner, an' folks a-eatin' somethin' 'r other on ever' hand, it's a leetle too much for ma's bump o' firmness.

"I should think a good plump week o' the toothache would break anybody o' pink taffy; but it don't seem t' break Phoebe. It's cur'us how some folks'll go ag'in their jedgment. Now, if I knew taffy'd bring on toothache, an' that I'd be laid up and have t' dope, an' have hot rags wrapped 'round m' jaw, an' that 'twould cost mebbe a dollar for campfire an' one thing another, d' you s'pose I'd go right up an' eat it? That's foolhardiness, t' my notion. It's silly t' thrust your hand in a lion's jaw, says I.

"Now, after last Fourth I spent 'bout a week heatin' bricks, an' washin' dishes, an' wringin' out hot smartweed rags, while ma set bolstered up in the rockin'-cheer a-groanin'. I guess it's a good thing she didn't make no 'count on goin'; leastways, not 'thout she's conquered her hankerin' for pink taffy."

Aunt Phoebe watched him from the window as he moved away over the pasture-fields. "I wonder what ever possessed 'im t' give in s' meek? He usually hangs on for the last word like a dog to a root. I'm sure I expected anyhow an hour o' squabblin'," she mused, as she saw the last of his brown coat disappearing over the fences. "'Tain't like Joh. I hope t' land he ain't feelin' poorly." She drew a long breath of relief that still held a faint tinge of regret.

"I s'pose the Rivuttses'll all be down, an' the Peterses frum Derby Hill," she reflected, half sadly. "We e't dinner with the Peterses last year, an' I 'member Mis' Peters had a raspberry pie, the first one o' the season. I wonder who all is eatin' dinner up t' the grove this year." She wiped the white oil-cloth dry with slow absent-mindedness.

"It's best as 'tis, though," she mused; "if Job ever got there once 'twould be the old story over ag'in. All goodness couldn't keep him away frum them fortune-wheel things, an' countin' riggin's an' shell what-y'-m'-call-'ems. I know how it goes. Ain't I summered and wintered 'im? An' he's the same old Job he allus was. He comes home hu'sted ever' last time. He can't resist the temptation, somehow, t' risk jest a little on the cheatin' things, an' so it goes frum bad t' worse till his pocket is as empty as an upturned copper b'iler. Though what he ever expects t' gain in the first place is more'n I can see. I'd as soon think o' sinkin' my money in a bottomless pit.

"He never did gain as much as a nickel, though he's allus a-hopin' to. I said last Fourth when he come home 'thout a cent t' bless 'isself with, that if there ever come any more doin's t' Hackettville the Jenkinses would stay t' home; that is, unless Job mended 'is ways powerful, which I guess ther' ain't much hopes of.

"I don't see how folks can do things so right ag'in their reason. Now, if I had any particular weakness I think I'd try t' govern it, not be pamperin' it up an' seein' what a big gump I could make o' myself. A body must bridle their want-t'-dos, says I.

"I wonder now if Grandma Fitzjohn'll be down? She's gettin' s' old she won't prob'ly git out t' see many more Fourth o' Julys. I'd kind o' like t' see her." She had finished the last of the dishes, and the tin dish-pan gleamed brightly from the back step where she had turned it over in the sun.

"It's a fine day t' be out; jest cool 'nough t' be comfortable. Last Fourth o' July 'twas hot an' sultry all day we couldn't injoy ourselves; an' then to'ards night it showered, an' that kind o' spoiled the fireworks. I shouldn't wonder if they'd have a first-rate time." She went into the front room and looked out through the pink mosquito-bar screen stretched across the doorway.

A rippling breeze stirred the red wealth of sweet-william on the east side of the path-way, and set the yellow-buttons bobbing on the other. Sweet-william and yellow-buttons were Aunt Phoebe's specialty.

A pair of trim brown sparrows came fluttering down from the shelter of the flowering currant near the fence to a more prominent perch upon a bending twig of lilac, where they chattered with noisy impatience.

"There! if I didn't most forgit their crumbs," said Aunt Phoebe, remorsefully. "An' it's the Fourth o' July, too." She brought an extra supply of good things from the pantry and scattered them out with a generous hand. "'Most starved, wasn't ye, poor little fellers?" she said, sympathetically, as she watched them clamoring greedily.

Away down in the hollow of the opposite fields she could see a tiny brown house snuggled among the trees. It was on the other road, the road that led to Hackettville.

"B'lieve I'll jest slip on my good dress, an' go over t' Mis' Jackson's a minute. I'd like t' know how her rheumatiz' is gettin' 'long. I b'lieve some o' that vinegar an' turpentine liniment would cure 'er right up. I'll have 'er try it. Mebby I could horry some mixed spices, too, t' put down my pickles. They're 'bout spoilin' t' be tended. I allus use mixed spices, an' so does Mis' Jackson.

"I won't stay long," she assured herself, as she smoothed back her hair and fastened a jet brooch at the neck of her figured sateen gown. "I'll be home 'fore supper fast 'nough."

She took her checked-gingham sunbonnet down from the clothes-bar, but hung it back again undecidedly. "Guess I won't wear it, after all," she mused, reflectively. "I might meet somebody." So she pinned on her best black hat with a single bunch of red artificial cherries.

Holding the umbrella over her head to keep off the sun, she walked down the posy-bordered path. She lingered a moment to pick a fragrant bunch of sweet-william to carry, for "I don't like t' go empty-handed," she said.

Once out in the potato-field Uncle Job "bugged" a few rows with meditative slowness. Down and back, then down again; but half way back he paused and set the pail between the two finished rows, and straightened his lank figure up to its full height. He took off his felt hat and ran his fingers thoughtfully through his tousled hair, then he brushed the dust carefully from the creased crown and fixed it up a little, and put it back on his head. He whistled a bit of melodious tune in a drowsy way.

The air seemed full of invisible voices calling persistently. The alder-bush beckoned white fingers alluringly.

He went over and sat down on the fence, and poked his hands deep into the pockets of his brown breeches, and jingled the few coins there calculatively.

The only sound that broke the quiet country hush was the rustling stir of wind in the long grasses and low shrubs that bordered the fence-corners, and the cheery chirp of a redbreast perched on a blackened stump along the roadside; but there were imaginary sounds that quite drowned Sir Robin's efforts for Uncle Job—the boom, boom, of heavy cannons and the intermittent pop of innumerable fire-crackers, the sound of fife and horn and drum, and the hearty cheers of loyal countrymen.

Uncle Job was a patriotic man, and as he thought of all this he deliberately drew the few coins from his pockets and counted them; then he gave his suspenders a forward hitch and brushed a bit of mud from his frayed coat-sleeve.

"I'll need more Paris green, that's certain," he mused, with slow, convincing force. "I hain't more'n half enough t' finish. Might's well git it t'-day as t'-morrow, for all I know. Time is time. It ain't but three miles. I'll be back long 'nough 'fore supper-time."

Then he clambered down off the fence; but not into the potato-field. Instead he crossed the road and went over into neighbor Herdman's orchard. He cast one furtive glance through the sheltering branches at the familiar gray house back across the road, half expecting to see Aunt Phoebe's round face peering curiously through the pink mosquito-netting; but there was no glimpse of her there, neither in any of the windows. "She's like as not laid down for a nap," he assured himself, confidently, as he thought how Aunt Phoebe's naps usually wore away a good share of the afternoons.

His great boots took on astonishing speed as they bore him nearer and nearer the scene of festivity. Through the orchard, over a clover-field heavy with honied blossoms, 'twixt rows of corn waving fresh and green in the invigorating breeze, then out into the road. He whistled no longer in a half-hearted, monotonous way, but with hearty jingling cheer.

At last he heard shouts, relieved now and then with a powerful report, and punctuated by the pop, pop, of lesser artillery. A thrill of the greatness permeating the atmosphere found its way into Uncle Job's bosom. His footsteps stretched out into an unmistakable stride as he clambered a long hill, the last hill that lay between him and Hackettville.

Aunt Phoebe rapped several times upon Mrs. Jackson's door without any response. Then she went around to the back door and rapped there with the same result. "Goodness! it can't be she's gone t' the celebration," mused the little woman, with a flutter of astonishment. "Mr. Jackson said she was down flat with rheumatiz'. Mebbe she's takin' a nap."

She went over to the window, and shielding her eyes with both hands, looked in through the glittering pane. Mr. Jackson's every-day boots stood propped up against the wall behind the kitchen stove, and Mrs. Jackson's work-apron hung limply over the back of a chair. "I do b'lieve they have gone," gasped Aunt Phoebe, with consternation. She tried the door. It was locked. The only sign of life about the house was Mrs. Jackson's spotted tabby, who crept out of the shaving-barrel on the back step and began to mew appealingly.

"A pretty how-d'-do, I should say," complained Aunt Phoebe, as she walked slowly back to the gate, and sat down to rest on a stone that looked invitingly up from the shadow of a great drooping willow. It was July, and Aunt Phoebe was not slender. She pulled a leaf of burdock up from the grass and fanned with it, pantingly.

"I might 'a' knowed they wouldn't be home; they never air, not if they're able t' stir foot. I never see sich folks t' gad." She sniffed the red posies in her hand for consolation. "Poor things, they're wiltin' a'ready," she said.

A lumber-wagon came jolting along the road, rolling up a cloud of white dust as it came.

"Now, I wonder whoever 'tis, anyhow," mused Aunt Phoebe, curiously. "'Tain't Herdman's, an' 'tain't Barrets', for they both drive white horses. I can't mind anybody that drives a span o' sorrels, 'thout it's Fitzjohn's. That's who 'tis, as sure's the world. That's Grandma Fitzjohn this minute, settin' up on this side. Well, if I ever!" she ejaculated, with pleased surprise.

The wagon jolted along till it was opposite the willow-tree, then it paused, and Aunt Phoebe waddled out to the road with a smile of welcome.

"Well, who ever thought t' see you this time o' day. Ain't you startin' out pretty late?"

"We couldn't exactly be called early birds," laughed Mr. Fitzjohn. "We're just goin' over t' look on a spell. We don't calculate t' take in all the doin's this year. Ain't you been over, Mis' Jenkins?"

"No; me and Job didn't count on goin' this Fourth," returned Aunt Phoebe, evasively.

"Well, you just climb right in an' go over with us. We don't mean t' stay but an hour 'r so. There's lots o' room," invited Mrs. Fitzjohn, with neighborly hospitality. "Come on, do! It'll jest be a nice little chance t' visit. We ain't had a good look at you this summer."

"Yes, do!" echoed Grandma Fitzjohn, coaxingly. Aunt Phoebe stood uncertainly.

"You're sure you'll be back by supper-time?" she questioned, anxiously. "You see," she confessed, "I left Joh t' work in the potato-field, an' he'll want supper early. If I thought I'd have plenty o' time—"

She felt inspectively through her spacious pocket for a solitary half-dollar that rolled lonesomely around in the bottom. "I s'pose I might be able t' git some mixed spices," she reflected, calculatingly, as she stepped one foot uncertainly upon the wheel.

"Your hat don't seem t' pinch much this mornin', does it, Joh?" questioned Aunt Phoebe, with sly insinuation, as she watched Uncle Job humbly selecting the old straw with a blue gingham patch, preparatory to going into the fields. "Cur'us how a body's head'll shrink so in just one night." There was a momentary twinkle in her gray eyes as she rested her hands on her hips and looked sharply at Uncle Job's embarrassment.

"No, I can't say as it pinches much," was the slow retort, "but if 'twas half as puffy as the northeast corner o' your face, ma, I'd probably have t' go bareheaded. Cur'us, hain't it, how a body's cheek can take such a raise in s' short a space o' time? Oh, you needn't think I didn't hear ye prowlin' 'round in the middle o' the night for the campfire-bottle, an' one thing another. I wa'n't s' sound asleep as I let on. What was it seasoned with this time, anyhow, ma, wintergreen 'r vanilly? Pink taffy's a wonderful flesh-producer, if 'twould only spread the thing 'round a leetle more even. Oh, I caught ye at it, Phoebe! You wasn't s' sly after all."

"Well, seein' you wus s' smart, I s'pose that wa'n't all ye see. I s'pose ye see me goin' through your brown breeches' pockets, didn't ye?" retorted Aunt Phoebe, with rising temper. "You needn't look s' scared; I didn't take nothin'. There wasn't nothin' t' take. Come, now, which was it, a wheel o' fortune, 'r a shootin'-match, 'r a pair o' nigger babies? You're a real bright man, Job Jenkins, I don't deny; but I guess you hain't got nothin' t' say this time. You might just as well mosey 'long out t' the pertater-field."

"We all have our short-comin's, I s'pose," mused Aunt Phoebe, with a sigh of resignation. "I have mine an' he his'n. I guess it's which and t'other the whole world over. We'll have our hands full, I shouldn't wonder, if we keep our own back dooryards clean," she added, as she applied a brick dipped in vinegar and wrapped about with woolen cloths to the aching victim of pink taffy.

JUNE

When the clover is deep in the orchard,
And the grass waves fresh and free;
When the strawberry sweet, in sunny retreat,
Waits for the robin or me;
When the bobolink down in the meadow
Is singing his rollicking song;
When skies are blue and clouds are few,
And the days are happy and long;
When the butterfly wooes the white rose,
And everything seems in tune,
Oh, then you may hear the clock of the year
Striking the hour of June.

A DAY ON SILVER CREEK

BY EMILY BOYD AVERY

THE spring morning was very fresh and sweet, and Lucinda Bargar, not many weeks removed from a bed of sickness, stepped out to enjoy its beauty.

She lifted a lilac branch and held it close against her face, feeling a keen pleasure in the fragrance of the young buds. The soft green grass, yielding beneath her feet, gave her a strange delightful sense of buoyancy. It was almost her first walk abroad since she grew strong enough to "be about," as Cousin Marg'ret expressed it. She bent over her favorite rose-bush to note the signs of life in its veins, and pushed the grass away from the tender blades of the young flags that were lifting their lances bravely as advance-guards of the return of vernal Nature.

A faint color crept into her pale cheeks, and her deep-set eyes glowed as she looked up at the blue sky and about her at the signs of life everywhere, and felt the newly awakened vitality within her throbbing in every vein. One looking at her at that moment would almost have forgotten that she was plain and past thirty-five, so instinct was the whole woman with happiness.

The resurrection of Nature was in harmony with her own resurrection to life. Everything had a beauty for her newly anointed eyes—the road running in front of the house, across the covered bridge and up the long, clay hill beyond; the old mill, just to the right of the bridge, black and weather-beaten against the tender green of the willows, and the silvery Niagara in miniature which turned its wheel; even the flock of snowy geese which she saw filing down toward the creek, haughty and awkward.

At the sound of wheels behind her she turned about and saw a carriage coming at a comfortable jog-trot down the hill. It had a plain sturdiness about it that seemed familiar, and in another moment she recognized the shaggy homeliness of old John Bull, one of Judge Warren's carriage-horses. The flush died out of her face, and a faint tremor seized her. She turned as if to go in, then a new impulse seemed to chain her feet.

"No, I ain't a-goin' to run away," she said to herself. "I've done nothin' to be ashamed of. Besides, I don't believe she'll—anyway, I'll see."

She lifted the lilac branch once more and busied herself with its buds, her fingers trembling. The carriage came nearer, and she recognized Judge Warren on the front seat holding the reins, and behind him the ample proportions and sweet, motherly face of Mrs. Warren. She almost held her breath as the carriage drew opposite where she stood. Judge Warren lifted his hat with half-embarrassed and awkward deference. Mrs. Warren held her head high and looked straight in front of her. The judge cast a furtive glance backward, saw how matters stood, and gave John Bull a cut which startled him out of his phlegmatic trot. Mrs. Warren's best black bonnet gave a sudden lurch, her decorous silk cape fluttered wildly for a moment, then the carriage rolled on across the covered bridge and up the clay hill in a cloud of dust.

Lucinda's hands dropped down, and the lilac branch fell out of them, all its sweetness gone. Quick tears sprang to her eyes. She hastily wiped them away.

"He's told her," she said to herself, "and she won't speak to me. I wouldn't 'a' thought it of her, an' she so tender-hearted. Well, they say the best woman's the hardest, sometimes, an' I reckon it's so. I reckon I'd feel the same in her place. She had on her best black silk to-day. I guess she was feelin' the Van Syckel blood right smart. Well, the Lord gives us our birth, an' that's somethin' we can't help, but it ain't right to forget that hearts is human an' can feel, it seems to me. Still, I reckon I'd feel like she does, maybe."

She turned slowly now and went back toward the house. She was weak and trembling from the excitement and the hurt she had received.

"Cindy!" called a sharp voice from the hall, "who was that went by jes' now?"

"Judge and Mrs. Warren, Cousin Margaret."

"Goin' to Col. Van Syckel's?"

"I s'pose so."

"Did Mrs. Warren speak to you?"

The gentle nature was on the defensive in an instant.

"I do' know as she saw me."

"Humph! I reckon not. The judge saw you, didn't he?"

"He spoke."

"I reckon Mrs. Warren didn't exert herself specially to see ye. How did she look?"

There was no answer. The inquisitor might have taken pity on the pale face and postponed the persecution, but Cousin Marg'ret was not a woman of fine perceptions. The silence of her dependent angered her and provoked her to renewed efforts at securing information.

"Was the jedge real friendly?"

Lucinda had picked up the ball of carpet-rags, the sewing of which had given her occupation in the hours of her convalescence, and was too busy sorting colors to hear the question. Mrs. Dawson's exasperation grew to white-heat. She had a violent temper, and ruled husband and child with a high hand. Nobody ever opposed her but this quiet Lucinda, and she only rarely and under great provocation. It had been nearly a year now since the last outburst between them. Sam, then three years old, had incurred his mother's displeasure by some childish disobedience. She had punished him until the blows and screams had brought Lucinda to the scene, and, white with terror and indignation, she had plucked him out of his mother's hand.

"Don't you dare touch him again," she said, with blazing eyes. "What right have you to be a mother, with your vile tongue and your vile temper; I wonder God ever gave you a little child."

Then she had carried him, sobbing and clinging round her neck, to a shady place down by the creek, where they both loved to sit, and had kept him there all day, taking him to her own room at night and scarcely allowing his mother a sight of him for a week. At the end of that time she had come to Lucinda humbled and repentant and received her child again. But from that on Lucinda was his real mother, and the little child and the lonely woman clung to each other with a devotion that was almost pathetic.

Mrs. Dawson had forgotten this occurrence now as she went on probing the wounded heart with cruel persistence.

"I guess Mis' Warren held her head pretty high. Didn't she look at ye at all?"

Still no reply from Lucinda.

"Well, I warned ye. Ye can't blame me."

"I ain't blamin' you, Cousin Marg'ret!"

"I knowed 'twouldn't do, Cindy. Mis' Warren's awful proud if they are plain folks, an' she knows how I've let you live here and do the work."

A dangerous sparkle of the eyes, and a faint glowing spot on either cheek, coupled with Lucinda's continued silence, should have told Mrs. Dawson she had gone far enough, but the visible rousing of this usually repressed nature gave a keen zest to her occupation, and she went on somewhat recklessly:

"Yes, she knows it's natural that a woman living on her relations as you are, an' sort o' doin' the kitchen-work to kind o' earn her livin', 'u'd be glad to git ol' man Bruce jes' for his propity. But I tell ye now, as I've told ye before, he's got mighty little left, for most o' it's gone to Mrs. Warren a'ready. He ain't kep' nothin' but a few acres around the old home place an' a little ready money in the bank to supply his few needs while he lives, so I understand. Ye're dependin' on a broken stick, Cindy, shore's ye're born. Mis' Warren'll give ye the cold shoulder, an' ye'll have to work like a nigger while ol' man Bruce lives. Then when he leaves ye a widow ye'll be wantin' to come back on me, but I d' know as I'll have a place for ye then. I d' know as I've got any call to feel any special interest in ye after that. I think most folks 'd say I'd done my duty by you. It's been a losin' business to take keer of ye lately. When I think of the waitin on ye I've had to do, and the big doctor's bill I'll have to pay—"

But the worm turned here. The smoldering fire burst into a flame and Lucinda Bargar rose, terrible in her righteous indignation, and looked down upon her relative with a quiet scorn that burned.

"Don't you disturb yourself by thinking you'll have any doctor's bills to pay for me, Cousin Marg'ret. Dr. Allen has told me over an' over again that if he tended me till doomsday he couldn't never pay me back for nursin' his little Jack through that spell of fever. He says I saved his life, an' it seems to hurt him when I even speak of money. An' as for your waitin' on me, many's the day I'd a perished for a drink of water if it hadn't 'a' been for Mr. Bruce, an' you know it. Do you think it makes any difference to me whether he's got money or not? I'd be glad to scrub for him on my knees the balance of my life. He's the only human bein', except little Sam, that's ever showed me a spark of love since my mother died. An' hunger for love's worse than hunger for mere vittals. I know I'm plain an' ordinary, but I've got feelin's just as tender an' true as if I was beautiful an' young, an' if it hadn't 'a' been for little Sam my heart would 'a' starved long ago. An' Mr. Bruce—I never can forget how he came every day all through my long sickness an' how his kind, cheerful face was like a ray of sunshine. He come at first out of the pure humanity of his great big heart, an' I never cared a bit to live till I found out that he wanted me to. An' what if he is past sixty? I'm young, an' when I get up out of this flat-creek bottom I'll be strong enough to work for us both, an' I will! You needn't never be afraid we'll be a burden to you." She paused here because her voice was trembling. Then in a moment she went on, "Of course, I'm sorry about Mrs. Warren. I didn't think she'd be so set against it. I reckon she can't help it, but I think she ought to think about him some. I know he'll be happier, and if the Lord lets me live, an' gives me strength, I'm goin' to see that his last days are his best days, an' that he lives to be a hundred. I know the time'll come when he'll be weak an' helpless an' not able to work; but I'll be happy if the Lord'll just let him lay in bed an' not suffer none, an' let me work for him an' wait on him."

Cousin Marg'ret sat speechless, abashed by a nobility of sentiment she could not understand. She had married a man many years her senior, and from motives she now imputed to Lucinda, and the result had not been fortunate for either. Before she could gather her forces for a reply Lucinda had walked out with a certain dignity which conscious integrity gives, and had gone to find solace in the society of little Sam.

Mrs. Warren's haughty exterior did not last much beyond the brow of the hill. As John Bull and Xenophon settled down into a quiet trot again on the level road, she felt a tear come stealing down her soft, satiny cheek; then another and another until she ceased trying to repress them and was sobbing uncontrollably. Judge Warren essayed consolation, but as this was a trouble in which he did not wholly sympathize with his wife, his remarks chiefly took the diplomatic form of, "There, Josephine, honey, don't cry!" Finding this did not have the soothing effect desired he gave vent to his own perturbed feelings by a lavish use of the whip, first upon one flank then upon the other of the long-suffering John Bull, till they went spinning along the uneven country road, bumping into ruts, running into an occasional rock or stump, and stirring up the dust with an appalling disregard of feminine apparel. This attempt at consolation was successful, for Mrs. Warren dried her eyes, and gaining her equilibrium as best she could, cried out, "Good land, Mr. Warren! are you trying to jerk my head off? Don't whip John Bull to death, an' I'll promise not to cry any more!"

This promise she succeeded in keeping until they drove into Col. Van Syckel's stately yard, and she saw Mrs. Van Syckel hastening out to her with open arms and a welcoming smile; then her tender heart overflowed her eyes again, and as she fell upon Mrs. Van Syckel's neck she sobbed out, "Oh, Mercy, Mercy, I'm in such trouble. Father's going to marry Lucinda Bargar."

Mrs. Van Syckel had her in the bedroom in a minute with the doors closed, and while she took off her bonnet and administered soothing pats and kisses she heard the whole story.

"You see it's had enough for father to want to marry at all, an' him a great-gran'father; but to marry a woman thirty years younger than he is an' a cook out of somebody's kitchen—"

Mrs. Van Syckel wisely said nothing. She knew this was a prejudiced view of the case which would yield only to time.

"I didn't know what was going on for a long while. Father's allus been fond o' old Uncle Sam Dawson, an' felt sorry for him on account of his wife's tongue, an' when he kept goin' there I didn't think anything of it. Even when he said Cindy was sick, an' kept takin' her little delicacies, I never suspicioned—he's allus so tender-hearted, father is. But last night when he come home an' told me he was goin' to—"

Here her feelings overcame her, and the two women wept silently together.

"I told Mr. Warren to hitch up early this morning an' bring me right up here. I don't know but what I'd 'a' come last night if it hadn't been so late, I was so worked up. An' it's goin' to be right away, too, just as soon as Cindy's well. Oh, I don't see why father couldn't be contented with us! Little Josie just loves her 'ol' g'anpa,' an' we've all been so happy together. I never could get my own consent to give up Sue and Josie until lately, though Charlie's allus wanted to go to housekeepin'. An' now they'd just made all their arrangements to take father's house right over on the next hill, where I could see them every day, an' be close to that sweet little lamb if she got sick. An' Sue was so sensible; she didn't want new things, but was perfectly willing to use mother's; an' I thought what a comfort it would be for me to have the old house open again after all these years, an' things like they use to be when mother was there, an' my own child an' grandchild enjoyin' my girlhood's home. An' now father'll want it himself. An' Cindy'll use mother's things—all her furniture, and everything. Oh, I can't bear it, Merey, there's no use talkin'! I can't! I can't!"

"No, no, Cousin Josephine, you won't have to stand that. No, indeed! Uncle Bruce was here yesterday and he told Stanley all about it. He knew how you would feel and he isn't going to change your plans. He said he wanted little Josie to have all her great-grandmother's things. He is going to buy a little place near Clifton, and he and—and—they are going to do market-gardening. He seemed very happy in his plans. Dear Cousin Josephine, do try to be reconciled. I believe it is better for him. She is a good woman and thoroughly devoted to him."

"Good woman, indeed! Mercy, don't tell me! That woman is marryin' him for the money she thinks he's got, an' when she finds out how things are—oh, poor father! Reconciled? I never can be reconciled—never!"

Late that afternoon Mrs. Dawson came into Lucinda Bargar's room with a conciliatory, "Cindy, there must be somethin' wrong at Warren's. Ruhe's just gone over the bridge like the sheriff was after him. Must be goin' after Jedge and Mis' Warren, or the doctor. Hope it's nothin' serious, for it's a good seven mile to Col. Van Syckel's, an' two mile more to Clifton."

Lucinda was already at the door. Far up the clay hill she saw the black horse and its black rider, and in a moment they were gone. She knew the black was Charlie Thornton's fleetest horse, and his special pride next to his wife and baby Josie, and a great fear smote her heart.

In an instant she was ashamed of her own selfishness, for down the opposite hill came Mr. Bruce, strong and hale, at a rapid gait. The two women hurried down to the stile to meet him, and he did not stop to give the customary salutation as he sprang from the saddle.

"We think the baby's dyin', Mrs. Dawson," he said, his voice trembling, "an' I come to see if you'd go over. There's nobody there with Sue and Charlie but old Grandma Warren, an' she's no idea what to do. Charlie's buggy was so wrapped up I didn't stop to undo it, but thought I'd just get Dawson's an' fetch you back in it."

Before Mrs. Dawson could reply Lucinda spoke, "I'm going back with you, Mr. Bruce," she said. "Cousin Marg'ret don't know nothin' about children nor sickness, and I may be some help. I'll be ready ag'in you get the buggy hitched."

"But Lou, child," he remonstrated, his voice full of affection, "you ain't fit. You're just out of a sick-bed yourself."

"The Lord will give me strength," she said, simply. "I'm a-goin'."

The face of an angel could not have been more welcome to Sue Thornton's tear-blinded eyes than that of Lucinda Bargar. The best nurse in all the country round, she was especially skilful with children. As she stepped into the room, she quietly laid aside her shawl and hat without waiting for any bidding, and stretched out her arms for the little sufferer. The agonized young mother yielded her up, sobbing out, "Oh, Cindy, Cindy, save my baby and I'll love you forever."

Little more was said. The quiet woman pillowed the little head on her bosom, gave a few whispered instructions and set about warming the tiny hands and feet.

Servants flew here and there to do her bidding. The young father, with his arms about his wife's waist, watched her as if she were the oracle of life and death. A mighty yearning arose within her to answer the unspoken prayer of those four beseeching eyes.

"Oh, God," she prayed, "save this precious little life even at the expense of my own. Give me the wisdom I so sorely need, an' help me to hold out till the doctor comes."

The minutes wore on and little Josie still lived. That in itself was some encouragement. Twilight fell; the cows came up to the bars and stood lowing to be let in, but the little life in danger in that still front room seemed to have paralyzed all the life on the farm. Night dropped down; the stars came out clear and brilliant; a dim light shone in the sick-chamber. But still that dread silence everywhere, and still the desperate struggle which the unwearying woman waged with death. By and by a bustle on the outside, and low moaning sobs in the next room told that the stricken grandparents had arrived. Oh, if the doctor would only come!

She drew the covering apart and felt of the little hands. Surely they were warmer. But the baby's moans almost broke her heart. Five minutes. Ten minutes. How the time dragged! Then a sound outside which Lucinda remembered to her dying day as the sweetest music she had ever heard—Dr. Allen's bluff, 'hearty voice.

"The Lord knows I'm glad to see you here," were his first words, as he sat down beside her and began, without delay, to examine the baby. For an hour he and Lucinda worked steadily, faithfully. Few words were spoken. At the end of that time the little eyes closed. The poor mother gave a faint heart-breaking scream. The doctor gathered her into his kind, fatherly arms.

"She is better; she will live," he said. "Sue, my child, your baby will live." And he took her tenderly from Lucinda and laid her in her mother's arms.

"God bless you, doctor!" said the father, huskily.

"Don't bless me; bless this good woman here. If she hadn't come when she did my coming would have been in vain. La bless me, Miss Lou! You ought to be in the bed this minute," he added, cheerily, to relieve the strain.

Mrs. Warren rose, her sweet face all aglow, and the tears streaming down her cheeks, and came over and put her arms about Lucinda Bargar.

"An' so she shall, in the best room in the house," said she, the smiles breaking through her tears. "There ain't nothin' on this place too good for her," with a meaning glance at her father. "When I think of what I suffered comin' along that awful road, thinkin' I'd never see that sweet little face in life again, nor hear that precious little voice a-callin' me, nor them little footsteps patter-

in' round the house an' makin' the sweetest music my old ears ever heard; and then to come and find her here after the way I've treated her to-day, an' all the mean thoughts I've had about her; an' to think we owe the baby's life to her—I tell you a woman that can overcome evil with good in that way is mighty close to the kingdom of God, an' I'll be glad to have her for— Mr. Warren, will you get out of the way an' let me show Cindy to the parlor bedroom?"

SPRUCE-GUM HUNTING

Although chewing-gum of various kinds—pepsin and special digestion aids—can be procured at every city corner from the penny-slot machines, nothing has ever taken the place of the genuine spruce, and it still sells at a high price. It cannot be imitated, nor is there any counterfeit which is anything like it. Some of the druggists in eastern Maine have contracts for spruce-gum aggregating thousands of dollars. Some of them have "staked" gum-hunters and sent them into the woods. Most of the Maine gum finds its way to the city markets that demand for consumption the round, red lumps that gleam with inner fires like the bloodstone. This choice gum is readily sold by the Maine wholesalers at $1.50 a pound.

Gum-hunting has many elements like rubber-cutting in the tropics, the men hurrying themselves in the wilds for months. The expenses of the hunter are almost nothing, and the receipts from his quest are likely to be in the nature of a small Klondike find. Some tobacco, a few bushels of beans, some coffee, flour and fat meat, with the game he kills, furnish him bodily fuel for the season, while he will frequently in a single day secure gum that will net him $10 in the market. He is independent, too, with his canoe, his snow-shoes and his gun. His canoe will be laid up during the winter, but when the rivers open he will bring down his winter's find. He is not likely, however, to work any too industriously in gum-hunting, but rather to make short days, and fish and hunt the remainder of the time. A few days' hard work will furnish him a cozy shack in the deep forest near the bank of a stream, and with wood unlimited and a sharp ax he is not likely to suffer, and when a storm is on he does not leave his comfortable camp.

The solitude of the thing would drive many men mad, but the northern woodsman is different from most men. He carries a pack with him at all times, even when hunting, so that should he run across an old gum scar he can take advantage of it without making another trip. When spring opens he returns to civilization, tough, rugged and hard as seasoned oak, and he may have a pack of gum to the value of several hundred dollars; but long, long before the next season the money is all gone, and probably some one will have to "grubstake" him if he is to go for gum again.—New York Tribune.

COAL FOR A BIG HOTEL

There are many things about the management of a large hotel which the patron takes for granted without inquiry or investigation. He can form no idea of the methods employed from what he sees in the office, the corridors, the dining-rooms and other parts of the building to which he has access, and there are not many guests who wish to pry into the secrets.

For those who take an interest in such matters the arrangements for receiving and disposing the coal are not the least interesting. The Waldorf-Astoria uses one hundred and forty tons of coal every twenty-four hours during the winter months. This coal is all delivered on the Thirty-fourth street side of the building, but one rarely sees a coal-cart in front of the hotel. It is all of the pea and buckwheat sizes, and is dumped from the carts into an opening in the ground in the middle of the Astor Court roadway. It falls into a hopper which holds about ten thousand pounds, and from there it is carried on an endless chain provided with buckets to a vast coal-bin which has a capacity of seven hundred tons. Daylight never reaches this bin, which, with its few blinking lights and great piles of coal reaching nearly to the vaulted roof, looks like a corner in a coal-mine and little like an annex to a palatial hotel. By an arrangement of levers the coal may be dumped from the buckets at various points, so with the aid of a shoveler it may be evenly distributed in the bin.

The boiler-room is situated lower down in the ground, and the coal reaches the fire-boxes without being handled. When the boiler attendant needs coal for his fire he pulls a lever which opens a trap, and through this half a ton of coal falls into a feeder which looks like a monster funnel. When the feeder has been filled it is pushed forward on an overhead track, and when it has reached the proper point a trap in the narrow end of the funnel is drawn aside and the coal drops into a trough in front of the fire-box, whence it goes into the fire.

From the time it leaves the coal-wagon until it enters the fire the coal takes care of itself; and with the exception of the straightening out in the bin, done by one man during the day and one at night, and the distribution over the fire surface by the boiler attendant, the coal is handled by machinery.

AN ALLOWANCE FOR THE CHILDREN

Not long ago, in a neighboring city, a "mothers' meeting" was held, at which many interesting topics relative to the education of children were discussed. Of these the one thought to be of most importance, and therefore dwelt upon at greatest length, was the education of the child in the art of spending money. The necessity for wise instruction in this most useful art is made apparent when we consider that many of the failures in life—not alone financial ones—are due to lack of knowledge, first of the worth of money, next of how to spend it. This subject is not taught in the schools; perhaps it cannot be, otherwise than in a theoretical way, but it can be made a practical matter in the home.

At the meeting mentioned above some thoughts were suggested, the practical value of which would at once be recognized by all having at heart the care and teaching of children. Prominent among these was the idea of a stated allowance for children, made always in proportion to the age of the child and begun almost as soon as the intelligence begins to dawn in his mind that money has power to procure for him that which he desires to possess. Let this allowance begin with perhaps no more than five cents a week, and gradually increase the amount as the growing ability to spend wisely proves itself; but in all instances let the weekly lesson accompany the weekly sum.

Upon reflection we cannot fail to perceive how far-reaching in their effects these lessons may be, and how wide a field they can be made to cover. It would seem that among the earliest, if not the very first, should be taught the lesson of what money is—an exchange for labor or effort of some kind put forth to earn it; and in this connection some light task to be performed daily, for which the allowance is supposed to be an equivalent, may be assigned. This will serve to make the new idea practical, while the knowledge that the same money was earned first, and in a more difficult way, by father or mother, teaches industry, its necessity and its reward. This lesson of industry is not a difficult one for little people to learn, for activity is natural to them, and to find it turned into channels of usefulness is generally an added pleasure.

Principles of economy and thrift are not always so easily taught, but these also can be instilled into youthful minds by means of the weekly allowance. We can make the little ones see that their wants are always in excess of their incomes, and for this reason a choice must be made. Here the reasoning faculties are called into play, as it will be necessary to choose from many things that which is most desired and will longest satisfy. They will come to understand that if their money is spent early in the week, and foolishly, they may have to forego something later which they will very much want. Should this occur, the time is ripe for a lesson in self-denial, as it would never do to allow them to forestall their allowance by purchasing what they had not money to pay for, and as an added result an aversion to debt, and love of honesty can but develop and form strong elements in the future characters of the children who are thus wisely taught.

Industry, economy, self-denial, honesty—and there are yet other lessons to be learned—gratitude to the All-Father, whose loving hand scatters good gifts far and wide among the children, and a love of giving on their part, because He gives and for His sake. They can be encouraged to set aside a part of their allowance each week for some charitable purpose, forming thus early in life a habit which will follow them through the years and prove an abiding source of blessing to themselves and others. Much time and thought are bestowed in these latter days upon the methods by which children shall be taught in the schools, and as a result it is believed that a better general system of education has been evolved; but the chief responsibility will always rest with the parents and personal guardians. Their influence is the first to make its mark in the process of character-building, which, for good or ill, goes on more rapidly in the home than anywhere else.

Why is it not also worth while to spend time and thought upon the methods which shall control the home teaching, remembering as we must that in the deepest, truest sense of the word nothing is education which does not work from within to the surface and result finally in outward achievement?

Lilla A. Whitney.

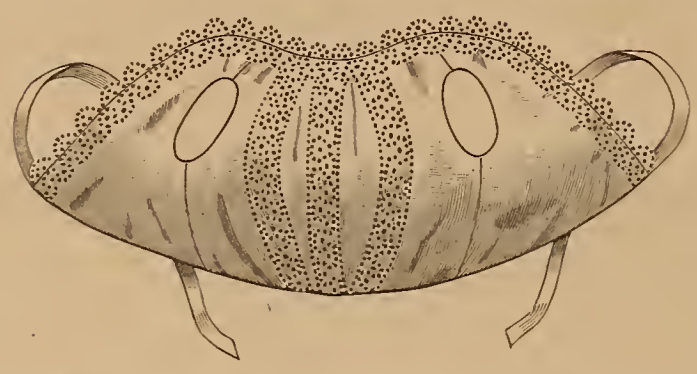
THIS, THAT AND THE OTHER

Just try putting a ruffle on the bottom of your kitchen apron and see how much cleaner your dress will be preserved.

There are but few of us, I presume, but have been prevailed upon by a wily agent to purchase a bottle of "The best cleansing fluid in the world." And soon to our disgust we found it to be utterly worthless. An excellent "cleansing cream" is made as follows: Dissolve one quarter of a pound of white castile soap in one quart of boiling water (rain-water is best). Then add one ounce of ether, one quarter of a pound of lump ammonia, one ounce of spirits of wine and two quarts of cold soft water. Shake before using, and apply with a brush.

A soothing and inexpensive baby-powder is made by carefully browning flour, then adding a little powdered orris-root.

Are your hands and face rough with the winds? Try this camphor-ice: One ounce of gum camphor; two ounces of spermaceti; four and one half teaspoonfuls of oil of sweet almonds. Put in an earthen dish on the back of the stove until dissolved, then stir



all together. While warm mold into whatever form you may desire.

A few drops of tincture of benzoin in a bowlful of water is an admirable tonic for the face. The benzoin whitens the skin and prevents it from wrinkling.

Have you ever tried putting thick cream on your face for ordinary sunburn or blistering? I have never found anything to equal it.

Do not fail to make some cucumber cream while the material is at hand. Slice the ripe cucumber in a bowl, then cover with sweet milk. If it can be obtained fresh from the cow, so much the better. After standing for a half day the juice will be extracted; strain, and keep in a closely corked, wide-mouthed bottle. Apply to the face with a soft cloth. Hold the hands in this preparation if you wish them to become soft and white. Then after drying the hands and face dust them over with oatmeal. It is the moisture left on the sensitive skin that "kills" the complexion. A chamois-skin face-cloth is a necessary article on every toilet-table.

It is something to know that cut-glass and silver ware will be improved in appearance by being washed in two waters, the first only slightly warm, the other, especially for the silver, quite hot. A little ammonia added to the water "semi-occasionally" adds to the luster. Delicate, dainty china, however, should not be rinsed in boiling water, as the delicate colors will be dulled thereby. An old tooth-brush will be found very convenient in removing dust from obstinate places either in the glass or china.

To some people of delicate digestion sauces and gravies are better if cooked in a double boiler for ten or fifteen minutes. It is the uncooked starch in them that renders them hurtful. It is much better to put the flour in the grease and allow it to brown before the milk is put in, if meat gravy is being made. And even for "clear sauce" it is better to heat butter and flour and smooth together. The flour then becomes partially cooked before the other ingredients are added.

Ella Bartlett Simmons.

THE ROBIN'S SONG

I.

She hung the cage by the window:
"If he goes by," she said,
"He will hear my robin singing;
And when he lifts his head
I shall be sitting here to sew,
And he will bow to me, I know."

The robin sang a love-sweet song,
The young man raised his head;
The maiden turned away and blushed;
"I am a fool!" she said,
And went on 'broidering in silk
A pink-eyed rabbit, white as milk.

II.

The young man loitered slowly
By the house three times that day:
She took her bird from the window:
"He need not look this way."
She sat at her piano long,
And sighed, and played a death-sad song.

But when the day was done, she said,
"I wish that he would come!
Remember, Mary, if he calls
To-night—I'm not at home."
So when he rang, she went—the elf!
She went and let him in herself.

III.

They sang full long together
Their songs love-sweet, death-sad:
The robin woke from his slumber,
And rang out, clear and glad.
"Now go!" she coldly said; "'tis late;"
And followed him—to latch the gate.

He took the rosebud from her hair,
While "You shall not!" she said;
He closed her hand within his own,
And, while her tongue forbade,
Her will was darkened in the eclipse
Of binding love upon his lips.

—William Dean Howells.

A NOVEL AND DAINTY CORSET-COVER

This being the season for thin shirt-waists, many of which are not only thin but sheer, the corset-cover, which perhaps was only plain and serviceable for winter wear, must now be fancy as well as practical, since in many instances it can be seen through the thin shirt-waist.

The one here illustrated is not only very pretty in design, but well fitting and easy of manufacture. It closes in the back, the long ends being crossed over and brought around to the front again, where they are tied in a bow which can easily be tucked out of sight. The corset-cover can be elaborately trimmed with lace or embroidery, or made perfectly plain, as desired. In either case it answers its purpose, which is to show as a complete and dainty underwaist through the sheer shirt-waist.

Emma Louise Hauck Rowe.

EVERY-DAY HINTS

Cooling the Cellar.—While a cellar needs to be ventilated, yet it is a great mistake to admit the outside air during the day. The object of ventilation is to keep the cellar cool and dry; but this very object is defeated and the cellar made both warm and damp if it is ventilated during the day in hot weather. When a cool cellar is opened during the day the entering air is warm, and as soon as it comes in contact with the cool air in the cellar the moisture it contains is condensed, and settles on the cool cellar walls. A damp cellar is the result, and mold and mildew will follow.

To avoid this open the cellar windows after the outdoor air is cooled at night, let the cool air circulate through the cellar during the night, and close the windows before sunrise in the morning. If the cellar air is damp and mildew appears, use whitewash freely and place a peck or more of fresh, unslaked lime in an old wash-boiler or similar receptacle in the cellar. It is said that a peck of lime will absorb a gallon of water. The lime will need renewing once or twice during the summer, which, if the cellar is kept tightly closed during the day and opened at night, unless there is faulty drainage, will prevent mold and mustiness.

Good butter cannot be made in a damp, musty cellar; for this reason many prefer to build a milk-house above ground. Such a house costs more than the underground cellar, but where well built, with double, filled walls, there is no doubt it is much more readily kept dry and sweet, and also cool.

Listerine.—A bottle of listerine should have a place in every home. It is a clear white liquid, an antiseptic and an antiferment. I have found it so generally useful that I am certain any one who once becomes acquainted with its value will always keep a supply on hand. Dentists recommend the use of listerine for the teeth. One teaspoonful to eight of water used with the tooth-brush every night will cleanse the teeth, purify the mouth and correct any acidity. For mild attacks of indigestion a teaspoonful of listerine in four or five times that amount of water will act like magic. Mixed with water in about the same proportion it is an admirable gargle for sore throat or to be sniffed up the nose for a cold in the head or catarrh. It is an excellent antiseptic wound dressing. A little girl fell on a board which had several rusty nails in it and made a jagged wound on her knee. We bathed it with the listerine solution until it was thoroughly cleansed and the flow of blood stopped, then dressed it with a mixture of three parts vaselene to one of listerine. The wound healed with no trouble, and the child was running about every day. A few days ago a little girl came running in, saying, "Mama wants you to please come quick; baby has cut his hand awful." I took my bottle of listerine and ran over. The little fellow had stuck the scissors almost through his hand. The listerine solution soon stopped the bleeding, and the vaselene and listerine has been all that was necessary since. I have found listerine valuable in so many cases that I want everybody to know its worth. In every family where there are little children so many emergencies arise where it seems to be just the thing needed, I am certain that if once tried you will prize it as much as I do.

Maida McL.

WHITE SHIRT-WAISTS

While the windows of the stores are piled high with waists of all colors, the critical eye of the woman looking for supplies detects flaws in many of them. Knowing full well the deceitfulness of color, she turns with admiration to the white ones, that no sun can fade or laundering change. If one cares to go into the elegant swiss insertion and tucking by the yard, which varies in price from two and one half to five dollars, the white shirt-waist can outcost the silk one. But all-over embroidery can be had as low as seventy-five cents a yard, and a yard is necessary for the fronts. Some, however, make only the yoke of the fine insertion material and the fronts of a fine dimity or organdie tucked elaborately. The use of insertion and hemstitching combined is very pretty and not quite so expensive. The sleeves can be made like a dress-sleeve or shirt-waist sleeve, as preferred.

The underdressing, too, must be fine and lace-trimmed. Let me here advise every one to wear a white corset. Strange as it may seem, many women think that by adding an underbody they can hide a black corset; but nothing can hide it worn with thin dresses, and it shows plainly as one walks against the light.

Care should be taken in wearing thin dresses to have on sufficient white skirts, and also to avoid those with insertions unless you wish black stockings to show between them.

With a white shirt-waist several skirts can be utilized, saving the waists till cooler days; and with a white skirt it can readily serve as a white dress on a very hot day.

Belle King.

ACID DINNERS

The housekeeper who serves a conglomeration of pickles, coffee, sweetmeats, cream cheese, acid fruits and salads for one meal is lacking in good judgment. In the simplest meal as much thought should be given to the harmony of all the food provided as to the harmony of the different parts of an orchestral overture. Even more pains should be taken, in fact, for a man may listen to discordant music and not die from the effects of it, but he cannot take all kinds of discordant food into his stomach and not suffer physically and mentally as well as morally. A great deal of the ill-temper and viciousness in the world to-day is no doubt the result of improper food.

In hot weather it is particularly desirable to choose such food as will digest quickly without fermentation. If a sweet dinner has been planned, vegetables cooked in cream, sweetmeats, cream cheese and custards are all in harmony. On a hot day when an acid dinner would be tempting, set the table with iced raspberry shrub or lemonade, sliced onions and cucumber served in crystal dishes with lumps of ice, and a pretty green salad-bowl heaped with crisp leaves of lettuce. If with these salads are served cutlets of lamb-chops, with tomatoes, followed by a dessert of lemon sherbet and fruit, you have a dinner fit for an epicure, because all is in harmony.

Lillian Crowell.

THE QUARREL

BY LALIA MITCHELL

A little lad amid the wheat
Had built himself a home,
With slanting walls of bundles neat,
With fragrant, golden dome.
And there he dwelt one summer's day
Until a lassie came that way.

And then the two at keeping house
Were happy as could be;
He scared away a robber mouse,
She gathered fruit for tea,
And wrapped it in a berry-leaf;
But all too soon they came to grief.

The little maid desired to play
They gave a fancy ball,
With lords sedate and ladies gay;
The lad said, "Not at all;
We're farmer folk; I'm going now
To feed my stock and milk my cow."

When he returned, I grieve to tell,
The house was tumbled down,
The lassie gone, the tea as well;
But did the laddie frown?
Nay; wiser than the race of men,
He shouted, "Let's begin again!"

With eager feet she hastened back,
A tear-drop in her eye.
"It's just too bad; I'm sorry, Jack;
But here's your berry pie.
We'll build the house as 'twas before,
And never quarrel any more."

RED RASPBERRY DAINTIES

BRING one pint (two cupfuls) of milk to the scalding-point in a double boiler; beat the yolks of three eggs, a pinch of salt and three tablespoonfuls of sugar until very light, add one tablespoonful of cold milk, and gradually pour into the hot milk, stirring constantly until it is creamy and smooth, but do not boil. Whip the whites of the eggs to a stiff froth, add gradually three tablespoonfuls of powdered sugar, and whip until stiff and dry. Put one pint of raspberries into a serving-dish, pour over the cold custard, spread neatly cut spoonfuls of the whites of eggs over the top, dust with sugar, set on the oven grate to yellow slightly, and serve very cold.

LEMON SPONGE WITH BERRY SAUCE.—Cover one half a box of gelatin with an equal amount of cold water; after half an hour pour one pint of boiling water over the gelatin and stir until dissolved, add the grated rind of one and the juice of two lemons and one heaping cupful of sugar; cook ten minutes, then strain into a deep bowl. When the jelly begins to form add the whites of two eggs beaten to a stiff froth, and whip until the whole is foamy and light. Heap lightly on a serving platter or mold, and set in a cold place for several hours. Serve with raspberry sauce around the base.

RASPBERRY SAUCE.—Stir one fourth of a cupful of sugar with one pint of berries, and after half an hour strain through cheese-cloth. Whip three fourths of a cupful of cream until thick, then by degrees whip in the berry-juice.

RASPBERRIES IN CREAM.—A simple and delicious dessert consists of one coffee-cupful of rich cream beaten to a stiff froth and sweetened, with two cupfuls of raspberries gently folded into it. Heap in a glass dish, and serve very cold, with or without cake.

RASPBERRY FOAM.—Soften half a box of gelatin in half a cupful of cold water, then add two cupfuls of boiling water, and stir until dissolved. Strain into a deep chilled bowl, add one cupful of sugar, a pinch of salt and one tablespoonful of lemon-juice. When it begins to thicken whip in the stiffly beaten whites of three eggs and two cupfuls of berries pulped; pour into a mold wet in cold water and set in a cold place for at least three hours. Serve with whipped cream.

RASPBERRY PIE.—Make a little light syrup of granulated sugar and when it is cold pour it over enough berries for a large pie. Line a deep pie-plate with rich pastry, brush the bottom with white of eggs, and bake. When ready to serve fill the shell with the prepared berries and heap whipped cream over the top.

RASPBERRY DUMPLINGS.—Make a boiled sauce of one cupful of sugar, one tablespoonful of butter and two tablespoonfuls of corn-starch. Stir until smooth, remove from the stove, and add one tablespoonful of lemon-juice. Make a dough as for baking-powder biscuit, and make raspberry dumplings same as you would apple ones for steaming; place them in a buttered pudding-dish, leaving plenty of space for them to rise, pour the sauce over and around, cover the dish, and bake until the crust is done—about half an hour. When baked take out the dumplings on a warm platter; add one half a cupful of sweetened raspberry-juice to the sauce, and let it come to a boil. Serve with the sauce poured around.

KATHERINE B. JOHNSON.

COLD DESSERTS FOR SUMMER WEATHER

To the world at large all frozen desserts are divided into two classes—ice-creams and sherbets. In reality there are half a dozen other frozen foods even more delicious than our old-time friends, and some of them easier to make.

An ice-cream freezer is no longer a luxury, and by observing a few rules with reference to freezing and ice the work is small. No freezer should be relied on which is said to produce cream in less than ten minutes, for the product is sure to be coarse and grainy, much inferior to the smoothly frozen cream. Never allow over three pints of rock-salt to a gallon of crushed ice. With a heavy wooden mallet, costing about thirty cents, and a bag of burlap about two feet square the ice can be easily crushed. Ice-bag and mallet are also invaluable for crushing ice for summer beverages, and even for the ice in tumblers, if you use carafe.

For plain, nutritious, easily made American ice-cream the following is a good receipt: One quart of milk, one cupful of sugar, three eggs and one tablespoonful of vanilla. Scald the milk, and after beating the eggs and sugar together stir into them slowly the scalded milk; put back on the fire, and stir slowly until the spoon is coated, not allowing the mixture to boil, or it will curdle; beat it for a little while, add the flavoring, and allow it to cool. Put it in the can. Then, remembering that the finer the ice the quicker will be the freezing, place the can in the pail with its pivot in the socket of the pail. Be sure the cover is on tight and a cork in the hole on top. See that the can is straight, then pack, first three inches of ice, then one of salt, and so on until within an inch of the top of the can. When it is all arranged put the paddle in the can, carefully re-covering it. Turn the crank, and when it moves very stiffly the cream is frozen. Even a few tablespoonfuls of cream will improve this cream, and they should be scalded also to remove the "raw" taste.

Frozen pudding is ice-cream, or custard frozen with brandied or preserved fruits added. Water-ice, sherbet, sorbet and frappe are all about the same thing, frozen a little more or less; that is, water flavored with fruit-juices. Orange-ice may be taken as a type: Boil a quart of water and two and one half cupfuls of sugar for ten minutes. Strain, and add the juice of six oranges and one lemon. For lemon-ice, four lemons and one orange. For strawberry-ice, one and one half cupfuls of juice.

Mousse of all kinds is delicious, and requires no turning in the freezer, being packed and left for several hours. Whip a pint of cream until stiff; pour off any drops that are left, whip into it four tablespoonfuls of powdered sugar and any flavoring extract you desire—a tablespoonful of sherry, or very black coffee, or vanilla. It should remain in ice four hours, and present a flaky, feathery appearance.

Frozen fruits are nice and easily made. Crush the fruit, and add to it a quart of water in which two and one half cupfuls of sugar have been boiled for ten minutes; then freeze.

Canned fruits are very useful, too. Strain the liquor from the fruit and sweeten it with sugar. Mix it with an equal quantity of scalded cream, and freeze. When it is frozen add the drained fruit, which should be shredded. Cover can and let it stay packed for one or two hours. All berries, cherries, plums, and even raisins halved and stoned, oranges, pineapples and bananas are all available for this kind of dessert. N. M.

SEASONABLE RECEIPTS

BANANA SANDWICHES.—Banana sandwiches are new and very nice. Take bread at least two days old, cut off the crust, and butter the end of the loaf; shave off a slice one eighth of an inch in thickness, spread with plain mayonnaise salad dressing, and add thin slices of bananas. Cover with another slice of bread. Pile on a plate on which a doily has been placed.

CUCUMBER SALAD.—One half dozen cold boiled potatoes, slice or chop, three large cucumber pickles, one onion chopped fine, four hard-boiled eggs. Save out the yolk of one, and chop the others and mix all. Mix the one yolk into a paste, stir in vinegar enough to mix the salad, add a little sugar, boil until it thickens, and when cold pour over the salad and mix with salt and pepper to taste.

APPLE CAKE.—One and one half cupfuls of pulverized sugar, whites of four eggs, one half cupful of butter, one half cupful of milk, two teaspoonfuls of baking-powder. Bake in layers. Whites of two eggs beaten to a stiff froth, add one cupful pulverized sugar beaten in. When ready to put between the layers grate in a good sized tart apple.

CREAMED EGGS.—Line the bottom of a hot dish with slices of fresh toast. Slice the whites of a dozen hard-boiled eggs over this. Rub the yolks through a sieve and put over the whites. Make a cream sauce as follows: Boil one pint of milk, take one heaping spoonful of flour and rub to a cream with one tablespoonful of butter, and add to the milk. Season with pepper and salt, and let boil up once. Pour over the toast, and serve hot.

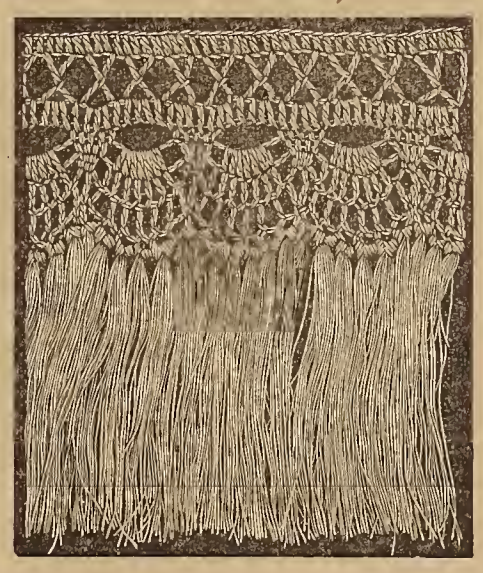
SOUTHERN SWEET-POTATO PIE.—Take two good-sized potatoes; boil and pare and put through a sieve or colander; add one cupful of sugar and the beaten yolks of two eggs, one cupful of milk, one teaspoonful of cinnamon and nutmeg; beat all up together and beat to a stiff froth, putting in a little sugar. When the pie is done take out and spread on the whites, and set back in the oven to brown.

DRESSING FOR SALAD.—The yolk of one raw egg (put all the yolks of boiled eggs in the salad), one tablespoonful of flour rubbed with the egg (put a little water to thin it out so you pour it in), stir in vinegar, and let boil till it thickens. Don't use any sugar.

RUBY.

KNOTTED FRINGE FOR BEDSPREAD

Since the outer cover on wooden as well as metal bedsteads is now allowed to hang free at the sides, a suitable ornamental finish is highly effective. On embroidered linen or satin ones crochet or knit lace is charming, but for the heavier dimity or marseilles ones a knotted fringe with pretty crochet head-



ing is far more effective. The one here shown, while simple and easily made, is very handsome. Make a ch, allowing two inches more on every yard than the exact measure of the spread.

First row—1 tr into every st of foundation ch.

Second row—1 ch, 22 d c under ring; join.

Third row—1 tr in every top ch of cross-bars; turn.

Fourth row—5 d c in first 5 tr, 9 ch, miss 6 tr; repeat to end.

Fifth row—4 d c in cluster of 5 d c, 2 ch, 1 tr in third ch of loop; 1 tr in fourth st, 3 tr in fifth st, 1 tr in sixth st, 1 tr in seventh st, 2 ch, 4 d c in next cluster of 5 d c; repeat.

Sixth row—3 d c in cluster, 2 ch, 1 tr in first tr of scallop; repeat 1 tr, 1 ch, 6 tr; 2 ch, 3 d c; repeat.

Seventh row—1 d c at top of cluster, 2 ch, 1 tr in and between every tr of scallop; repeat.

Eighth row—Join last loop of one scallop to first loop of next one by 1 s c; 4 ch, 1 s c in the next six loops of scallop; repeat. Wind smoothly together as many strands of the linen or cotton used for heading as are needed for the fringe, and knot it into every edge loop. MARGARET SAUNDERS.

PIES

Successful pie-makers are not as numerous as the masculines would wish; for where is there a man or boy who does not like his piece of pie to top a good dinner, notwithstanding that fashion's decree says that fruit is the proper dessert now.

Eight even tablespoonfuls of flour, two even tablespoonfuls of lard, a pinch of salt and one fourth teaspoonful of soda sifted with flour, and cold water enough added to the mixture to make dough (not too stiff), will make two crusts for a medium-sized pie. Roll crust for top first, trim to proper size, and lay aside. Roll bottom crust, leave one half of an inch projecting around the edge of pie-plate; fill with fruit, and season, not forgetting a little salt or butter. Moisten the edge of crust, lay on the upper one, and roll the bottom crust up and over the top one, pressing firmly together. If done carefully no juice can escape in baking. Yes, it is a little extra trouble, and it is worth it—not to have the best of the pie sizzling on the bottom of the oven. One cannot imagine how the little bit of soda improves the crust unless they have tried the same.

GYPSY.

CANNED APPLES AND RHUBARB JAM

There is a time in the late winter when, having tired of dried fruits or winter fruits, one longs for a taste of fresh apple-sauce. To prepare for this time, procure the Lady Blush apple when it comes into market, and put up some apple-sauce in new tin cans. Make it as for present use, and can hot, as you would for other fruits, filling the cans full; seal with wax. It will not keep so well in glass. I have opened it in March, and it tasted as though it had just been made.

Having an excess of rhubarb one year, I put up a quantity in this way: First I cut it into inch lengths, not stripping off the outer covering, filled Mason jars with the pieces, which were then entirely covered with cold water, and the tops of the jars tightly screwed on. When opened cook in the same way as fresh rhubarb. Mine kept nicely and was much enjoyed.

A delightful jam can be made from rhubarb. Carefully wipe it and cut it into inch lengths. Use equal weights of rhubarb and sugar. Put the sugar over the fire to melt, with an asbestos mat underneath to keep it from burning; let it boil about twenty minutes, skimming and stirring it; then put in the rhubarb, and boil steadily for twenty minutes. If you use old rhubarb, cook it first without sugar until it is quite tender, then add the sugar.

A very dainty conserve can be made of it by adding one pound of dried figs to every five pounds of the rhubarb. You can divide the conserve into parts and flavor it differently, giving one a strong flavor of ginger, another flavor with grated lemon-peel, always carefully washing the lemons before grating them.

Never strip young rhubarb, as the outer skin gives it a more delicate flavor and contains the juice that forms a jelly.

You will always want these in your fruit-cupboard after the first trial. B. K.

SUMMER SICKNESS

In summer, when children in the country are as free as the wind, it is difficult to enforce any strict rules of diet. They are allowed to overload their stomachs day after day, at any time and all hours, and the result is an irritation of the intestinal mucous membrane, which increases until a soil is prepared for the reception, growth and development of the disease-producing germs which are the cause of so many summer complaints. The intense heat is also an active factor; or a cold, or any nervous derangement brought on by a shock or fright, may also cause these distressing ailments.

When the family physician is not at hand, the mother should give some mild cathartic to clear out the stomach and bowels and also flush the bowels with enemas. For this purpose a pint of tepid water to which has been added a spoonful of listerine and a spoonful of glycerin is antiseptic and soothing. Give nothing but liquid food for twenty-four hours. Boiled water given in small quantities at frequent intervals is good, or barley-water to which has been added the white of an egg beaten to a froth.

While the mucous membrane is inflamed all food containing hulls, seeds or waste should be avoided. Boiled milk, rice baked in milk, lamb broth, corn-starch, farina and white-bread toast may be given. As the stomach grows stronger, dropped eggs, chopped beef or lamb and a puree made from peas may be added.

It was a wise physician who said the best remedy for this class of diseases was "to prevent the beginning." As impure air, improper feeding, nervous derangement and filthy, unsanitary environments are all causes of summer diseases, the best preventives are pure air, sufficient sleep, proper and regular diet, plenty of pure water (boiled if possible), and absolute cleanliness of person and surroundings. F. B. C.

SUMMER LUNCHEON DISHES

A LUNCHEON of the right sort served on the piazza or lawn of a warm summer evening is a deservedly popular form of entertainment, and no one can compound such dainties equal to the country housewife who is fortunate enough to have ice, because whipped cream is half the gooduess of most of them, and this is not only expensive, but that of proper consistency is difficult to obtain.

STRAWBERRY WHIPPED CREAM.—Stir one cupful of fine granulated sugar and two cupfuls of ripe strawberries together, and after standing one hour rub through a fine sieve. Cover one half a boxful of gelatin with an equal amouut of cold water; at the expiration of half an hour place the dish iu hot water aud stir until the gelatin is well dissolved. Whip three cupfuls of cream to a stiff froth, with the bowl standing in a pan of chipped ice, pour in the gelatin, and continue whippiug until it is quite firm; then add the strawberry-pulp, aud gently fold the mass until it is smooth aud will keep its shape. Heap in individual dishes, and serve with white cake or ladyfiugers.

BAVARIAN CREAM.—Cover one half a boxful of gelatin with an equal amount of cold water, and let stand in a cool place half an hour. Theu set tbe dish over a hot teakettle and stir until the gelatin is dissolved. Put two cupfuls of cream in a chilled bowl, and whip to a stiff froth; add a pinch of salt, three fourths of a cupful of powdered sugar, one half a teaspoonful of vanilla and one fourth of a teaspoonful of almond extract, and beat them in gently. Then add the gelatin, and stir from the bottom thoroughly until the cream begins to solidify, then pour into a wet mold, and set in a cold place to harden. Serve with strawberry sauce and accompanied with almond macaroons.

STRAWBERRY SAUCE.—Beat one and one fourth cupfuls of powdered sugar and one and one half tablespoonfuls of butter to a smooth cream; add gradually, beating until smooth before adding others, one boxful of medium-sized berries that bave been washed and drained on a uapkin.

ALMOND MACAROONS.—Shell and blanch balf a pound of almonds; dry, and pound them to a smootb paste, putting in a few at a time and by degrees adding one teaspoonful of bitter-almond extract. Beat the whites of four large eggs to a stiff froth, add gradually one pound of powdered sugar, and whip until very light. Add this and the grated yellow riud of one lemon to the almond paste, stir well, and drop on buttered paper iu rounds no larger than a silver quarter placed two inches apart. Dust tbickly with powdered sugar, and bake in a bot oven until light brown. When done, moisten the paper on the upper side with a little water, and remove. (This receipt was obtained from Mrs. Rorer, and never fails if properly followed.)

RASPBERRY MOUSSE.—Sweeten enough ripe red raspberries to make one pint of juice; let them stand one hour, and then strain through cheese-cloth. Soak one fourth of a boxful of gelatin in an equal amount of cold water for twenty minutes, then dissolve in one fourth of a cupful of boiling water. Whip one pint of chilled cream to a stiff froth. Set a bowl containing the berry-juice in a pan of ice, then add the gelatin; stir constantly until it begins to thicken, then add the whipped cream, and stir until thoroughly blended. Put into a close-covered mold, and pack in broken ice and rock-salt for three hours. Serve some as brick ice-cream, accompanied with angel-food cake.

LAYER BLANC-MANGE.—Make a plain corn-starch blanc-mange by bringing one pint of milk and four tablespoonfuls of sugar to the scalding-point in a double boiler; dissolve three tablespoonfuls of corn-starch in an equal amount of cold milk, add a pinch of salt, and gradually pour it into the boiling milk, stirring constantly for fifteen minutes, then draw to the back of the stove. Beat the whites of three eggs to a stiff froth, whip them into the cream until it is foamy and light all through, then divide it into three equal parts. Dissolve one heaping tablespoonful of finely scraped chocolate in a spoonful of boiling water, add one teaspoonful of vanilla, pour into the cream remaining in the boiler, and continue stirring until smooth and evenly colored; add rose-coloring extract to a secoud portion to make it a pretty pink, and flavor with a little cinnamon extract, and leave the remaining third white, flavoring it with lemon. Wet a pretty shaped mold in cold water, pour in the white blanc-mange, then the pink, and lastly the chocolate, spreading each layer evenly. Stand in a cool place for three or four hours, and serve with chocolate wafers.

CHOCOLATE WAFERS.—Grate four ounces of chocolate, and mix with it two tablespoonfuls of flour and one fourth of a teaspoonful each of ground cinnamon and baking-powder. Add one cupful of powdered sugar to the yolks of six eggs, and beat very light; add the grated yellow rind and juice of a lemon, and beat five minutes longer. Whip the whites of the eggs to a stiff froth, add the chocolate mixture to the yolks, beat, and then lightly fold in the whites of the eggs. Pour the mixture half an inch thick into buttered shallow pans, and bake in a moderate oven for half an hour. When cool, spread one sheet with a very thin layer of currant or other tart jelly, and place the other on top. Ice with vanilla icing, and when this hardens, cut in squares.

VANILLA ICING.—Break the wbite of one large egg in a bowl, and gradually beat into it one cupful of confectioners' sugar, and flavor with vanilla. Spread thinly over cake.

All the dainties given above should be accompanied by sberbets or water-ices.

KATHERINE B. JOHNSON.

A GLANCE AT MONTICELLO

When John Trumbull conceived the idea of painting his great masterpiece, "Declaration of Independence," absolute authenticity was desired, and where it was possible the artist obtained the portraits from tbe living persons. So Trumbull crossed the water and painted Thomas Jefferson's portrait in Paris.

Pictures handed down from generation to generation are great educators, but object-lessons are still more impressive. Virginia, we are proud to say, has many such for the traveler's eye. Never was I so interested in Thomas Jefferson, his birthplace, his political career and last resting-place, as the day I sat under an old linden-tree of his planting, and gazed at Monticello, the home for half a century of the third president of the United States.

This old mansion is situated on a lofty eminence in Albemarle county, Virginia, just four miles from Charlottesville. The road winds up quite a little mountain, the trees touch brauches in friendly accord, and protect tbe traveler from the heated rays of the summer's sun; here and tbere along the way a watering-trough affords refreshment for the tired beasts. Fully a half mile before reaching the old home a lodge confronts you, and the gates are thrown open by an old gray-haired darky. I remarked while passing through, "Uncle, it's right tiresome work?" "Yes, sah, ti'some work and little pay." (The tips are not always up to his expectation.)

The old historic Monticello, completed by Jefferson in 1773, caps the summit of the bill. It is built of red brick, aud the windows are of small panes of glass. The house strikes you at first as beiug rather low and not very imposing-looking, but after making a complete circuit of the house, noticing the different entrances and casting an eye over the surrounding landscape, you are impressed with tbe fitness of the whole. From the north slope of the lawn you behold the four white pillars marking the entrance where Virginia's elite of Colonial days swept in and out—silent sentinels they are, bearing evidence of the mauy decades that have seen them performing their silent duty. Would that they could have given utterance and told me of the visits of Madison, Adams, Monroe, Lafayette and others, all of whom now lie moldering in unforgotten dust, while they still keep watch over the camp-fire of Jefferson's ligbting in the valley below. Just above this doorway is visible the double face of an old clock whose deep-toned strokes it is easy to imagine have gathered volume with the years, and seem to be saying of time:

"Men may come, aud men may go,
But I go on forever."

Jefferson's study, bedroom, dining-room and ball-room were specially noticed, and verily this glance has made the slumbering Jefferson an interesting, living reality.

A short distance from the house is the old burying-ground inclosed by an iron railing. In front of two tall iron gates stands a plain shaft with this inscription:

Here was buried
Thomas Jefferson,
Author of the
Declaration
of
American Independence
of the
Statute of Virginia
for
Religious Freedom
And Father of the University of Virginia.

Born April 2, 1743, O. S. Died July 4, 1826.

PATTIE HANGER.

WHAT THEN?

What if the day be cold aud dark and long?
What though I drag a hurdeu through the street?
Men treat me coldly and affairs go wrong,
But I to-night shall hear two little feet,
And two soft hands shall stroke my weary brow,
And two sweet lips shall press against my cheek—
What if I hear complaiuing only now;
What though no one has friendly word to speak?

When men are coldest aud the killing grind
Weighs heaviest upou me through the day,
How sweet it is to leave my cares behind
And rush to where I hold imperial sway;
To dance my loving subject on my knee,
To press his face against my own, to hear
Him lisping haby words of praise for me,
And feel and know again that God is near!

But, oh, if after some dark day, and long,
When I have heen pushed down hy stronger men;
If, after some sad day when thiugs go wrong,
I should not hear his little feet—what then?
Oh, if some night when, heavy-hearted, I
Rush home to claim his loyalty again,
He should not meet me with his joyous cry—
If he were gone—what then, alas! what then?

—E. S. Kizer, in Chicago Daily News.

A CHAPTER ON PRESERVING

In the good old days of loug ago, before germs had become a ban of the housekeeper's life, we used to cook the fruit thoroughly to "keep it," and scalded the jars so tbat they would not crack. To-day we beat the fruit to destroy all germs, and we scald the jars to sterilize them. The result is the same, no matter why each process is performed.

The absolutely safe way to make a rich preserve that will keep for years, if need be, is the old-fashioned way of one pint of fruit to one piut of sugar.

Housekeepers will tell you, and good housekeepers, too, that tbree quarters of a pound of sugar will do, but this is not absolutely safe, particularly with acid fruits. Be sure always to fill your jars very full, and screw your covers very tight. Air is dangerous, and the least possible amount of it is best.

For preserves and jams and jellies which are put up in cups or glasses paraffin is invaluable. It is bought from the druggist, melted in a little saucepan, and about a tablespoonful poured on the top of the glass. When it "sets" you ueed have no further coucern about your fruit keeping.

Marmalades are a valuable way of preserving fruit which is not absolutely up to the mark of perfection, which is necessary for preserves. Small specimens, or fruit with imperfections, which should be carefully removed, make very nice marmalade, which is both healthful aud useful for lunch, particularly if there be children in tbe bome.

A doctor told me that pure, home-made currant jelly was one of the healthiest of foods, and he recommended its use. Spread on buttered bread at least three times a week during the winter for a delicate child.

A very delicate and pretty-looking marmalade may be made from pineapples. After peeling and removing the eyes tbey should be grated on a large, coarse, flat grater, the kind that is known as a "cabbage-grater." Put alternate layers of fruit and sugar into the kettle, preserving in the case of marmalades and jams the proportion of three quarters of a pound to a pint of fruit. Cook it, not too rapidly, till it becomes thick, stirring frequently, and if necessary, crushing it with a potato-masher till it becomes a mass. When it gets quite clear, and hardens if dropped on a plate, it is doue, and may be put into glasses and sealed with paraffin.

Raspberries and currants mixed, and a few cupfuls of stoned and chopped raisins added, make a novel and agreeable jam.

Citron preserve (an old-time preserve) is very nice. The fruit should be pared and cored, and then cut iuto strips. Our grandmothers would have notched the edges or cut them into fancy forms. Allow a pound of sugar to a pound of fruit, aud to six pounds of fruit put four lemons and a quarter of a pound of ginger-root. Put the ginger into a cheese-cloth bag, and boil it in three pints of water. Then remove the ginger, and add the sugar and the juice and grated rinds of the lemons. Stir till the sugar dissolves and the syrup is clear. Add the citron, and cook until it is clear. Can it, and seal it up while hot.

If you have large amounts of fruit to dispose of, the item of sugar may become a serious one.

In canning, one quarter of a pound of sugar may be used, or none at all if you cook the fruit in its own juice. Surely, when the process is so simple, no bit of fruit should be allowed to waste.

Clean and prepare the fruit, and pack it tightly in jars, and seal it at once. Put the jars into a kettle, standing them on muffin-rings or bits of wood. Cover them as high as the neck with cold water, and let it come to a boil for one bour. Then leave them in the water till it becomes cold. In this way your fruit is preserved in its own juice and retains its flavor. Apples treated this way are nice for pies and sauces all winter long.

For cherry preserves (a Soutbern receipt), wipe your cherries and prick each one with a needle. To each pound of cherries put one pound of sugar. Make a syrup of one quart of water to one pound of sugar, and wben the syrup boils, put in your cherries. Let them remain till they are so clear you can see the stones; then take them out, and put in jars. Let the syrup boil till it is perfectly clear, then pour it over the cherries, and seal. This looks very pretty when the stems are left on the cherries.

Never wash your fruit, and never preserve fruit picked immediately after a rain.

Wooden spoons are best, except in jams, as they break and tear the fruit less.

Use only the most perfect fruit for preserving, and do not attempt to use anything but granulated sugar. A large-mouthed funnel is most useful in filling the jars. N. M.

SUCCOTASH

"Do tell me," begged a friend who was dining with me, "just how you make this succotash, for I never find any elsewhere as good as yours."

Tbinking that perhaps some others might like to know just how to make the delicious dish I will transcribe my answer for their benefit.

Go out into tbe garden, or you can send some one if you choose, aud pick as many lima beaus as you think you'll ueed, but remember you'll add half as mucb sweet corn. After shelling the beans put them in your kettle with enougb boiling water to cover well. Too little will allow them to burn down uuless you watch closely, while too much will spoil the flavor. If you have two quarts of beaus add a lump of bread soda the size of a large pea; tbis makes them wholesome. Let them boil fifteen minutes, theu add half as much corn, which you have scored and scraped from the cob, one large teaspoonful of salt (more afterward if you wish), a dash of pepper and one spoonful of butter. Rigbt here allow me to say that if you follow the advice given in many journals you will "drain all the water from the beans before seasoning." If I wished a flat, tasteless mess I would do this, otherwise I would not, as the water contains the essence nnd flavor of this delectable dish.

When the succotash has boiled fifteen or twenty minutes after the corn is added, pour in one pint of sweet creaun, let it just come to a boil again, taste to see if it is seasoned sufficiently, then "call your friends and neighbors in," and I'll warrant they'll "rise up and call you blessed."

CORA AMANDA LEWIS.

BEAUTIFUL HANDS

Not alone within the mansion
Where the lords of earth reside,
In the city's broad expansion,
And the gilded halls of pride:
But within the rural cottage
Where no costly gems abound,
Toiliug for their daily pottage,
Lovely hands are often found.
Beautiful hands are those that do
Deeds of love the whole day through.

Oft the hand of rings encumbered
Has no charm for bleeding grief,
While the toil-worn hauds are uumbered
With the hauds that give relief.
Wealth and pride can add no beauty
To the grasping hand of greed,
But the hand that does its duty
Shall be counted fair indeed.
Beautiful hauds are they that do
Deeds of love the whole day through.

—James Larkin Pearson.

IN THE YEAR OF OUR LORD

The decree of Asshur and Chemosh and Bel
Flamed like lightning across the sky;
"If my children refuse, at my shrine, to bow,
By the sword of my wrath they shall die."
And up through the clouds of the incense smoke
Leaped the quivering tongues of flame,
That spake of the cities and souls, destroyed,
For the glory of each dread name.

And Jareh brooded, with fierce bent brows,
Over Ai, that little town;
Its altars blackened, its hearthstones cold,
'Neath the pall of his vengeance frown.
"Thou shalt stretch thy spear o'er the cursed land,
From the rise till the set of the sun:
And when none remain, for the worship of Bel,
In that hour shall thy task be done!"

While he of the Ægis watched the earth
From the snows of Olympus' height;
And the tears and woes of his helpless sons
Seemed good to his pitiless sight.
His presence was shrouded in milk-white clouds,
But his voice through the thunder spake—
"When I nod my head all the gods shall bow,
And the earth and the sky shall quake."

But above and beneath and behind them all
There waited that Unnamed One,
Whose heart is Pity, whose breath is Peace,
Who loveth us, every one.
'Till a new star piercing the ebon sky,
Shone forth o'er a little shed,
Where Caspar and Melchoir and Balthazar
Bowed low, at the white Christ's head.

And over the untamed heart of the world
Did a comfort undreamed of creep;
Like the sapphire dome of the heavens was it high,
Like the unfathomed ocean, deep.
Not Might, but Right, was the law Love gave;
Not conquest, but war's surcease;
Not sacrifice, but a contrite heart;
For the old-time striving—Peace.

No sword Love bore in his stainless hands;
A cross was the throne he won;
A reed for a scepter; a crown—but of thorns,
When the work of his life was done.
But Chemosh and Jareh and Asshur and Bel—
Like to smoke wreaths, they fade away;
"Father, forgive them—they did not know"—
Is the prayer Love's white lips pray.

O ye who bow at his nail-pierced feet,
And own him your Lord, to-day—
Look forth! What meaneth that awesome sound,
What meaneth the dread array,
That surges out from the hoary east,
That strides from the golden west,
From the snow-covered north—from the flower-wreathed south,
At the kings of the earth's behest?

Banners and standards of countless hues;
Trappings of silver and gold;
The lightning gleams from saluting swords
Of legions too vast to be told.
Steel-mailed squadrons, to guard the sea,
Fortresses guarding the land;
The clamor and crash of the cannon's voice
Enforcing war's grim command.

Shall the years that have slipped nineteen hundred times
Through Eternity's fingers pale,
Since the white Christ died, that his brothers might live,
In the end be of no avail?
Ye can drown his voice in the roar of your guns,
But until war's wrong shall cease,
Your lives disprove what your lips profess—
Your faith in the Prince of Peace.
—Frances Bartlett, in Boston Transcript.

SOME HOMELY TRUTHS

HOW MANY of us resolve to do some particularly good or noble act "when we get time?" We rush on from day to day promising ourselves the fulfillment of honest intention, yet the time slips by and we never seem to find that opportunity for good that is always just a wee bit ahead of us in the future. "When I get time," says the young mother, "I will train Jamie to be more courteous." "When I get time," says the growing daughter, "I will relieve mother of some of her burdens." "When I get time," says the wife, "I will read and dress up and try to make myself more congenial to my husband."

Alas! so few of us find the time. Jamie goes on growing more and more unbearable every day, and when at last he has grown beyond the training habit, and his mother sorrowfully recognizes the fact that he is a boor whom nobody can tolerate, she wishes with all her heart that she had taken time to mend his ways when the one moral stitch would have done more good than the nine taken when the hole in his manners was beyond repair.

The daughter hasn't the time to help her mother. She means well; she often worries as she sees the dear person growing more and more feeble, but it is not until that mother has exchanged time for eternity that she realizes all she could have done if she had only taken a few moments from the selfish routine of her own existence and applied them to lessening the labor in another's.

So with the wife—she hasn't the time to fix up, she hasn't the time to keep herself well informed, and when the husband naturally wanders to fields more congenial, she rebukes herself for not having stolen a few moments from her other home duties to give to the first and foremost exactions of her domestic life.

We haven't the time to do so much that would not only benefit ourselves, but others as well; yet we have the time to enter into a dozen and more enterprises and schemes that, like boomerangs, return to injure us.—Philadelphia Times.

"LOOKING FOR TENDERNESS"

The original name of Sarah, the wife of Abraham, is said to have meant Strife, but this was afterwards altered to Princess. She was very beautiful. Her white, delicate complexion was probably a lovely contrast to the dark skins of the Nubian and Ethiopian women of Pharaoh's court. But beauty is no more sufficient to make a happy home than beautiful colors to resist a shower of rain.

We cannot deny to Sarah many good qualities. There was an intense devotion to her husband, enabling her to make the supreme sacrifice of a woman's life. There was a profound belief also in the divine promise, so that by faith she was able to bear a son in her old age because she judged Him faithful that had promised. And there was the love which He was able to inspire and maintain between herself and Isaac.

But with all this Sarah was undeniably hard with Hagar. "She dealt hardly with her." Ah! there are other ways of dealing hardly with people than by laying violent hands on them. But all these are forbidden by the law of Christ. Bitter speeches, unkind and cutting insinuations; the always reminding people of their past failures and present weaknesses; the absence of sympathy in crushing sorrow or unendurable pain—these things are not uncommon between those who, like Sarah and Hagar, are compelled to live under the same roof; but they are not to be once named among us as becometh saints.

The story is told of a distracted man who used to travel up and down one of the provinces of France, going from house to house, entering unbidden; wandering from village to village, accosting men, women or children whom he met always with the same question, "I am looking for tenderness; can you tell me where to find it?"

The country folks made light of his innocent wanderings, and would say, "Have you not found it yet?"

"No," would be the sad reply, "and yet I have searched for it everywhere."

"Perhaps you will find it in the garden." Off he would hurry. The gardener might refer him to the stable, and the stable-boy to the next house; the next house to the next village. So, mournfully, to the end of life the poor imbecile wandered on, half conscious of his hopeless search, half realizing the ridicule with which he was everywhere received.

Let us live that we may not have to stand where the vicar, Amos Barton, stood, and utter his words over some life with which we dealt so hardly that it fled from us: "Milly, Milly, dost thou hear me? I didn't love thee enough; I wasn't tender enough to thee; but I think of it all now."

"You place this flower in her hand, you say,
This pure, pale rose in her band of clay?
Methinks, could she lift her sealed eyes
They would meet your own with a grieved surprise.
When did you give her a flower before?
Ah, well, what matters, when all is o'er?"

What a travesty of a home is that where quarreling and bickering are always filling the air with the clash of swords! We can well understaud Solomon's verdict—and he had the experience, not of two women, but some hundreds—"it is better to dwell in the corner of the house-top than with a contentious woman in a wide house." Dear woman, do keep your tongue quiet; and if you cannot, ask the Lord to do it for you; and if your heart is full of jealousy and passion, open it to him that he may divert the river of water of life, which is clear as crystal, into it. Then if you must find a vent for your feelings, let it be in kind deeds.—F. B. Meyer, in Christian Endeavor World.

HOW DO YOU WALK?

A graceful carriage is obtained by first knowing what to avoid. Go out in the street and notice the walkers in front of you. See the lady that waddles so along the street that you are reminded of ducks. Observe the man beyond her, how he racks from side to side. Notice the young lady who raises her head and throws back her shoulders, and walks as if her spine were a bolt of iron running into her head, stiff even to her fingers.

Observe the young man who, while all the rest of the body is manly, droops his head in a sheepish way. Or note the other one opposite, who, with head thrown far back, becomes rather a strut; or whose head is thrown high as to give it a rakish air. Observe the fingers spread out as if he had accidently got his hand into the butter or something sticky, while the one in front makes his hands into fists.

Watch the motions that give the ungraceful poises, and endeavor to correct them by the law of opposites.—Health.

DO SOMETHING

Each member of a Christian church should be a worker for Christ. Our Lord has never granted a dispensation to a single one of us; would any of us desire that he should? His vows are upon us all without exception. Are we each obedient to his word, "Occupy till I come?" Are we putting out our talents to interest? If we are not doing so, we can never enter into rest. Rest implies previous labor. We are bidden by the Holy Spirit to labor to enter into the rest of God; it is the way thereto. Idlers are unrestful, fidgety, worried and worrying, fretful and fanciful, troubled and troublesome. They are happiest who are most completely consecrated to the service of God, and most fully absorbed in obedience to his will.—C. H. Spurgeon.

THE PEARL-DIVER

The Christian is like the pearl-diver, who is out of the sunshine for a little, spending his short days amid rocks and weeds and dangers at the bottom of the ocean. Does he desire to spend his future life there? No, but his master wants him to. Is his life there? No, his life is up above. A communication is open to the surface, and the fresh, pure life comes down to him and from God. Is he not wasting time there? He is gathering pearls for his master's crown. Will he always stay there? When the last pearl is gathered, the "Come up higher" will beckon him away, and the weights which kept him down will become an exceeding weight of glory, and he will go, he and these he brings with him, to his Father.—Professor Drummond.

THE PERNICIOUS GRUMBLING HABIT

Do not let your child acquire the habit of grumbling. Stop the first beginnings and it will never become a habit. If there is just cause of complaint, try to remedy it; if there is no possibility of improvement, teach that silent endurance is the best way to meet the inevitable. It is never wise to stay in a place and grumble. If the things you dislike cannot be altered, change your environment. If on reflection you decide that, balancing one thing with another, you would rather bear the ills you know than to fly to others that you know not of, bear them in silence.

Somebody once asked Queen Victoria's late physician, Dr. Jenner, if anxiety ever caused him to lose sleep. "Why should it?" he said. "I go; I do my best. Who can do more? Why should I lose sleep?"

And who would murmur or misdouht,
When God's great sunrise finds him out?
—Mrs. Browning.

LOOKING BACK WITH BEN

Oh, do you remember last winter, Ben Bolt,
When the mercury slid away down;
When it seemed that your nose would be frozen, Ben Bolt,
Ere you go to your office down town—
Those days when we grumbled at twenty below,
And the water-pipes froze every night—
When we scolded the plumber for being so slow,
And the iceman kept well out of sight?

Oh, do you remember those mornings, Ben Bolt,
When you worked with your overcoat on,
And declared you'd be glad (don't deny it), Ben Bolt,
When the confounded winter was gone?
And don't you remember those chilly nights, too,
When we couldn't get bed-clothes enough?
Oh, how the frost nipped us and how the wind blew!
Just think of it! Wasn't it tough?
—Chicago Times-Herald.

A FALSE JEWEL

WHEN Mrs. Smith decided to give a tea-party she made up her mind that it should be the event of the season. With that in view she started elaborate preparations, promising Mary, her cook, an extra week's wages if she would do her best to make the party a success. Finding that she would need a girl to help serve the tea she asked Mary if she knew any one that she could get.

"Sure, mum," answered Mary, "there's me sister what's used to waitin' an' who'll be glad to get the chance, for she's a poor gurl just out of a job."

As Mary herself was a jewel, Mrs. Smith did not question her further; and Mary received orders to have her sister on hand.

Mary's sister reported for duty, and Mrs. Smith gave her minute instructions how she should act, wishing to give the guests the impression that she was a regular member of the household.

Things went on swimmingly until Mary's sister, seeing that one of the guests was out of tea, came up and wanted to know if the lady would have "anither." The guest smilingly answered that she would, whereupon Mary's sister, snatching up the cup, hawled across the room in the most approved cheap restaurant code, "Draw one!"—Detroit Free Press.

A TIME FOR SILENCE

A boy got a splinter in his foot, and in spite of his protestations his mother and grandmother decided to place a poultice over the wound. The boy resisted vigorously.

"I won't have any poultice," he declared, stoutly.

As the hot poultice touched the boy's foot he opened his mouth.

"Yon—" he began.

"Keep still," said his mother, shaking her stick, while the grandmother applied the poultice. Once more the little fellow opened his mouth.

But the uplifted switch awed him into silence. In a minute more the poultice was firmly in place, and the boy was tucked up in bed.

"There, now," said his mother, "the splinter will be drawn out, and Eddie's foot will be well."

As the mother and grandmother moved away triumphantly, a shrill, small voice came from under the bed-clothes. "You've got it on the wrong foot."

WHAT THEY SAID

A crank came running into the office of a Montana paper and said that a man had just swallowed a two-foot rule and died by inches. The editor started out at once to learn further particulars of the death, and meeting a doctor, told him about the case. The doctor said, "Pshaw! that's nothing; I once had a patient who swallowed a thermometer and died by degrees."

A couple of bystanders then chipped in. One of them said it reminded him of a fellow down in Kansas who swallowed a pistol and went off easy. The other one said he had a friend who took a quart of apple-jack and died in good spirits.

AFTER THE TRIAL

"And so she poisoned her husband! Ah, how could she do it! She is so sweet-looking and so beautiful."

"That's just the reason. She knew she would have a cinch with the jury."

NUMEROUS ANTIQUITIES

"I presume there are many interesting relics to be found in a village as old as this?" inquiringly remarked a recently arrived and intellectual-looking guest.

"Wa-al, yes," replied the loquacious landlord of the tavern at Allegash. "Deacon Jonks has a candle-snuffer that was made in seventeen-seventy-something; Lyman Tinker has a pair of tongs that had the honor of knocking out the brains of a British soldier durin' the Revolution; Charles Henry Skiddy has a foot-warmer that was used in the first church built here; Judge Waller has a maiden daughter that was a grown-up young lady when I was a small boy, and I have a bill against Lawyer Craft that he promised to pay in two weeks from the date, which was over fourteen years ago. Ah, yes, there are a good many interestin' relics to be found in this village!"—Puck.

AS OTHERS SEE IT

"What are the trees saying as they sigh?" said the poet, as he and the practical man paused on the banks of a river.

"They are saying," said the practical man, "that a saw-mill in this section would pay big dividends."

Then the poet said something about the music in the river that rippled at their feet.

"Yes," said the practical man. "I was just thinking that such a fine water-power could turn enough mill-wheels to grind all the corn in Georgia to a first-class article of meal!"

"I don't think," said the poet, "that you and I can pull together."

"I know it," said the practical man, "so I am going to dinner. Where are you going?"

"I'm going to wonder," said the poet, "how and where I'll get a dinner."

A PRIZE STORY

She clutched the air wildly.

"Am I mad or am I only dreaming?" she shrieked.

For the eighty-fifth correct answer a prize of four million yearly subscriptions to the "Languid Ladies' Companion" will be given. Answers will be counted only when written with Ichabod's indelible ink, on coupons to be found only in one-hundred-pound crates of Peter's pepsinized prunes for that full feeling. Please mention yourself in answering, as this is important.—Detroit Journal.

WOMAN'S CONSISTENCY

She had suffered more at his hands than from any other person. In evidence of this her nerves had been harrowed and unstrung; but he had placed a seal on her lips and drilled her into obedience to the slightest turn of his hand. Yet she met him with a pleased and careless smile and (more than all) paid his bill cheerfully. For he was a dentist, and her teeth were her pride.—Judge.

ALMOST CRIMINAL NEGLECT

"Here," said the statesman, who had been temporary chairman of the convention, "I'd like to know what kind of a party organ you're runnin', anyway."

"Why," the editor asked, "what's wrong?"

"In your account of the proceedings you have not once referred to my speech as 'a ringing address!'"

ACCOMPANIMENT

A police officer met an organ-grinder in the street, and said, "Have you a license to play? If not, you must accompany me."

"With pleasure," answered the street musician. "What will you sing?"—Halfpenny Comic.

BRIGHT BITS

"I say, waiter, this salmon cutlet isn't half so good as the one I had here last week."

"Can't see why, sir. It's off the same fish."—Punch.

Bacon—"Are the flies bad up your way?"

Egbert—"I think not. A great many of them seem to go to church Sundays."—Cleveland Plain Dealer.

Aunty—"Do they teach by the object system at your school?"

Little boy—"Yes'm. They is always objecting to something or other."—Credit Lost.

"Now, Percy, if you're a really good boy I'll take you to the circus."

There was a long pause, and then, "Ma!"

"Yes, Percy?"

"S'pose I'm the best boy I've ever been, will you leave me there?"—Life.

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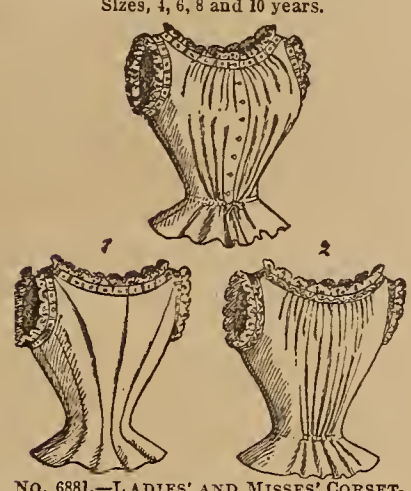

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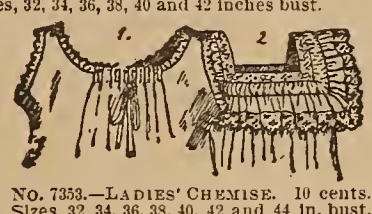

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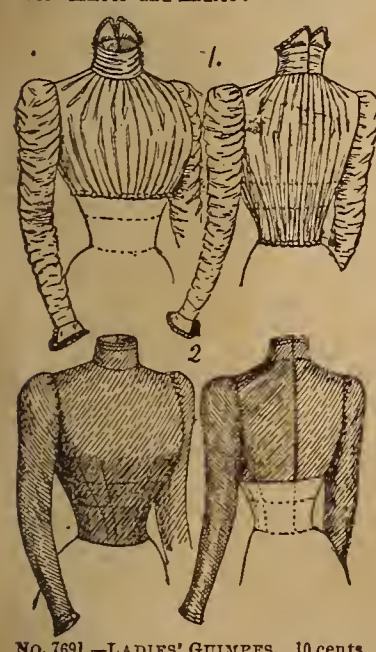

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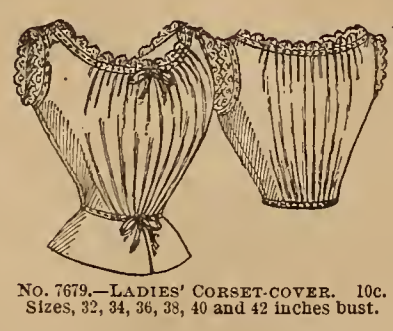

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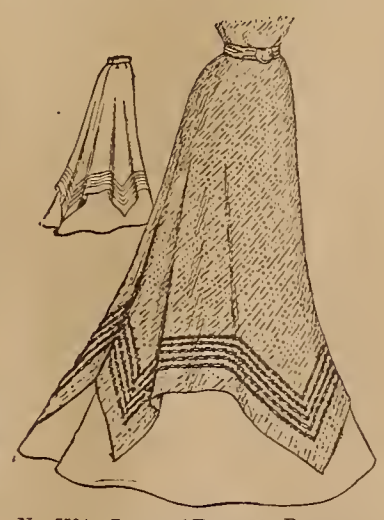

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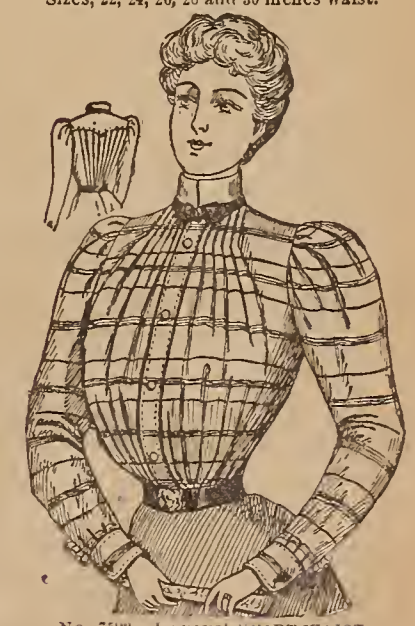

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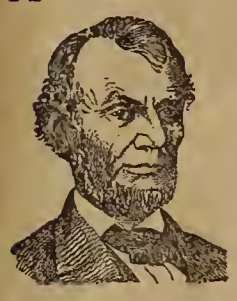

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No. 999. By Jerome K. Jerome. For that common but extremely unpleasant complaint, "the blues," this book is a pleasant and effective cure. Mr. Jerome is sometimes called the "English Mark Twain," and is certainly one of the best living writers of pure, wholesome fun. There is not a dull line in the book. Every paragraph is scintillating with flashes of brilliant wit. Who has not, at some time or another, had "the blues," or been "hard up?" Who has not been in "love?" For a royal treat read the author's thoughts on these and numerous other subjects. The "thoughts" which fill a book may be "idle," as the author terms them, but they certainly emanate from a busy brain.

THE CRICKET ON THE HEARTH

No. 953. By Charles Dickens. This is a simple tale of home life, and being a fairy tale is sure to interest the children. The story opens about dusk, with Mrs. Perrybingle putting on the tea-kettle, which soon begins to have gurgles in the throat, and indulges in vocal snorts.

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She went to the barber's,
To get him a wig,
And when she came back
He was dancing a jig.

There are seven more pictures and fourteen verses similar to the above to the story of "Old Mother Hubbard." The book contains one hundred and thirty-nine stories and over seventy pictures aud illustrations. This is one of the best books for children in the entire list.

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No. 984. Tells the supposed travels and surprising adventures of Lemuel Gulliver into an unexplored past of the world, where he met with a race of people no larger than your hand. A great favorite with boys and girls, who like to read books of travel. Illustrated.

ROBINSON CRUSOE

No. 977. By Daniel Defoe. The life of Crusoe and his man Friday, on a lonely island, has enlisted the sympathy of more boys than the heroes of any other story, and to-day it is even more popular than ever before. It satisfies their thirst for adventure without the demoralizing effects common to boys' stories.

JOHN PLOUGHMAN'S PICTURES

No. 971. By the late Rev. Chas. H. Spurgeon, the great London preacher and evangelist. This is one of the most original and popular books of the age. The author states in the preface that its object is to smite evil, and especially the monster evil of drink, and it is safe to say that the plain talks of John Ploughman, couched in Spurgeon's quaint sayings, his wit, his logic, his power for good, have accomplished more than any similar publication. This book can be read by every member of the family over and over with increasing pleasure and profit, and every mother who has a son that must face the temptations of the terrible curse of drink will place a good weapon in his hands when she induces him to read this work. Illustrated.

THE SCARLET LETTER

No. 955. By Nathaniel Hawthorne, one of the greatest authors America has produced. It is a romance of intense interest, exhibiting Hawthorne's extraordinary power of mental analysis and graphic description. The entire book is of a high moral character, and can be read with profit by every member of every family.

AESOP'S FABLES

No. 973. These fables were written during the glory of the Greeks, and though old, they are even more popular to-day than ever before. Many of the wise sayings that are repeated on all occasions are from these fables, yet not one out of a thousand know who first wrote them, as "He killed the goose that lays the golden eggs." Æsopus was a slave, but by his mother-wit gained fame that will endure as long as any of the "Seven Wise Men of Greece." But the great beauty of these fables lies in the fact that they are so very simple that all children will read them with delight, all the time unconsciously learning the greatest and best lessons of an upright, unselfish life. Every person should have a copy of "Æsop's Fables." There are about 200 of the best fables given in this book, with forty-nine illustrations and six pages devoted to the life and times of Æsopus.

SHORT STORIES

No. 969. A book containing a number of short stories of adventures, which will be eagerly read by boys and girls.

A BARTERED BIRTHRIGHT

No. 986. By Franklin Fitts. This story tells the struggle between justice and injustice, in the author's entertaining style. A man occupying a prominent position in a leading banking-house becomes addicted to the gambling habit and takes money from the bank. The blame is attached to a young man recently discharged by this man for paying attention to his daughter. The story ends with a victory for justice and the offender sighing in vain for squandered honor and a forfeited birthright.

THE MERRY MEN

No. 958. By R. L. Stevenson. When an author's works live after him, they are, as a rule, worth reading. The stories by Stevenson have stood this test, and are now widely read. "The Merry Men" is a story that you will not forget soon after reading it.

OUTDOOR SPORTS

No. 966. A book of games and healthful recreation for outdoor sports of every description, with rules for playing and marking off the grounds, or making the bats, ropes, balls, etc. It contains forty-four illustrations, showing proper positions in swimming, boating, cricket, foot-hall. dumb-bells, Indian clubs, etc. Among the many games given in this book the following are a few: Foot-ball, Base-ball, Marbles, Hopscotch, Prisoner's Base, Duck on the Rock, Tops, Flying and Making Kites, Cricket, Shinny. Croquet, Tennis, etc. Oftentimes boys are at a loss what to play, but with this book they will always have something new.

TALMAGE ON PALESTINE

No. 974. A book containing a series of sermons, by the Rev. T. De Witt Talmage, about his recent and noted travels through Palestine, telling what he saw and learned there. They make such delightful reading, and are so instructive and entertaining, that the book is immensely popular. On the days he delivered these sermons in his church in Brooklyn, which seated 4,500 people, thousands were turned away from the doors for want of standing-room inside the church. Even to read the book makes one thrill through and through.

Many of the books are by famous authors, known wherever the English language is spoken. There are novels by such great authors as Bertha M. Clay, Charles Dickens, Nathaniel Hawthorne and others. There are sermons by the great Talmage, books by the inspired Spurgeon, fables by Æsopus, stories of adventure and travel for boys and girls, chimes and jingles for the children, books of choice fun and humor, and numerous other books on various subjects. Some of the books contain more than 200 pages, others from 100 to 200, while the smallest has 64 pages. All are bound in strong paper covers with attractive designs. We guarantee entire satisfaction in every case or your money will be cheerfully refunded.

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CHINESE AGRICULTURE

V.—PLANTING AND HARVESTING

BY WILLIAM N. BREWSTER

RICE is to China what wheat is to America. It is a noble cereal, but its culture is far more laborious and difficult than that of wheat. To begin with, the soil must be plowed in the water, it must be pulverized and made smooth with two or three inches of water covering it. A month before planting the rice is sowed broadcast in a bed especially prepared for it. When the plants are about one foot high they are taken up and transplanted in the field in rows eight or ten inches apart. Each plant is put into the soft mud by hand, one at a time. While growing water must be supplied every four days by one of the processes described in the previous article on irrigation. Plowing is impossible, but while the plants are small they go over the field once every fifteen or twenty days on their hands and knees in the water pulling out every spear of grass or weeds and working over the soil with their fingers. This is done at least twice. From eighty to ninety days after planting the grain is harvested.

In South China they take two rice crops off of the lowlands every summer. In the region between the belt where two crops are easily obtained and the belt where the season is long enough for but one they resort to a curious method of obtaining two crops. In the first place they gain time by sowing in beds, as above stated. After the first crop has been growing about sixty days, another planting is made between the rows of the first. When the first crop is ripe it is carefully cut, bunch at a time, with their little short sickles, and the second crop is one third grown when the first is harvested. For economy of land this surpasses anything I have ever seen or heard of.

It is simply a fight for existence in this densely peopled part of China. They must have this second crop or starve. When there is even a partial failure of either crop prices advance to semi-famine rates. And so, where the season is too short to allow the full time necessary to mature both crops they overlap them by this ingenious but laborious method.

The implements and methods of harvest are those used in the days of Ruth and Boaz. The little grass-hook cuts the straw close to the ground. An armful of the grain is carried to the threshing-machine, which is a marvel of simplicity. A big tub is placed in the field. A woven bamboo mat stood on end inside the tub, encircling two thirds of it, prevents the grain from flying out, and on the open side stands the workman, pounding a bundle of the grain, heads down, upon the wooden grate placed across the tub. Three or four blows and the grain is in the bottom of the tub. Chickens could not fatten upon that straw-stack. At night machine, straw and grain are carried home. The next day the process is continued, and until the family fields are cleared. In many cases even the stubble is pulled out by the roots and dried and used for fuel or rotted in vats for fertilizer. Sometimes when the condition of the soil is favorable the entire stock of grain is pulled out by the roots and the whole of the plant is saved.

Wheat is sown in November and harvested in March in South China. Its culture is not essentially different from that in America, except the tools are all primitive and require a maximum of labor for a minimum of results. Harvesting is much the same as that of rice, but it does not fall off the heads so easily as rice, so that it is carried home and threshed on the threshing-pavement in front of the house. It is never stacked or "shocked" in the fields. If it were it would not be there the next morning unless guarded all night.

It is not tramped out by cattle. That would be too expensive and wasteful. It is pounded by the old-fashioned flail. Then it is winnowed by the simplest process conceivable. The farmer waits until a good breeze is blowing; with a dipper he scoops up two or three pounds of the grain mixed with the chaff, holds it as high as he can reach, and lets a thin stream flow from the dipper. The wind does the rest. If one winnowing is not sufficient the process is repeated. The wheat is dried in the sun upon the threshing-floor and stowed away in bins in the farmer's house. He has no barn. It would be of no use to him if he had. Everything in it would be stolen the first night. The straw, however, is neatly ricked outside, and is made good use of in many ways. Not a particle of the crop is wasted.

THRESHING BEANS WITH A FLAIL

But there is another staple article of diet, especially in the sandy coast regions of South China, that is used by all except the comparatively rich far more extensively than both rice and wheat combined.

Sweet potatoes are much cheaper, and flourish on lands that cannot be flooded for rice. They are cultivated in essentially the same way as in America. But to preserve them for a year they are prepared in a way peculiar to China. As soon as dug they are cut into thin slices by shaving them upon a knife fixed in a board shaped much like a large carpenter's plane placed upside down. The slices are scattered over the field from which the potatoes were dug, and dried in the sun for three or four days. This is done the last of November or in December. It is usually dry and frosty at this season. When half dried they are gathered and spread much thicker upon the threshing-floor, of which every house has at least one. Here two or three nights of frost and days of sun suffice to dry them thoroughly. These slices are then as hard as sole-leather, and nearly as tough and tasteless. They are boiled and eaten by millions of Chinese as their staple article of diet.

Beans grow at the same season as wheat, and almost in as great quantities. Bean-curd is a staple article of diet, and the beans are cooked in a great variety of ways. They are harvested at about the same time as wheat, and threshed with a flail.

Peanuts are grown in quantities in the same region that produces the most sweet potatoes. When digging-time comes the whole population turns out. All the schools have a vacation. It reminds one of Cape Cod in the cranberry season. Men, women and children are sitting or kneeling in the dirt, a row of them crossing the entire field. A little wooden paddle and a bamboo basket are the only tools, and they scratch the earth like chickens.

Another method is sometimes used. The field is flooded and the ground plowed and stirred up with rakes. The peanuts when loosened from the soil come to the surface of the water and are skimmed off. They claim that this requires less labor; it is certainly less picturesque. The workmen and workwomen are mud-bespattered from head to foot, and are a sorry-looking sight.

These brief sketches are not intended to be exhaustive of the subject. Nor are they descriptive of all China. Doubtless many of the methods and principles herein described are quite common to the empire, but let no one assume that they are. They are accurate for Hingua and much of South China. Methods quite different are in use in other parts of China.

The Chinese farmer undoubtedly has a great future as he has an extensive past. He will change his methods slowly, but he will change. He will be very careful to be sure the new is an improvement upon the old before he discards the old for the new. And when he unites his practical experience, patience, industry and marvelous economy with Western knowledge and enterprise he will astonish the world with his achievements.

It is the Chinese, not the Filipinos, who will make the new American island empire a veritable Eden in beauty and fertility in the twentieth century. They will do it because of the qualities and experience and methods briefly sketched in these five papers.

[CONCLUDED ON PAGE 7 OF THIS ISSUE]

A FANNING-MILL

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WITH THE VANGUARD

IN AN address to the graduating class of Cornell University Governor Roosevelt said: "There has been a good deal of discussion recently—I am thankful to say that I believe that it is a one-sided kind—due to the statements of certain gentlemen who have amassed large fortunes, to the effect that they do not believe in a college education. This country could better afford to lose every man in it who has amassed a large fortune than to lose one half of its college-bred men. We can get on without the men of immense fortunes. Sometimes we can do very well indeed without them, but we could not do the best work possible to be done save for the men who took the chances offered to train themselves so that they can do the fine and delicate work which must be done if we are to raise our civilization above a purely material basis.

"If your college training teaches you to think that you belong to a little select set of people apart from and unsympathetic with the rest of your countrymen, then it is an unmitigated curse, and it turns you out useless to your country and to yourself; but if your college turns you out feeling that you are exactly like your fellows, save that on you rests the heavier load of responsibility, because you have had exceptional advantages; if it makes you realize more keenly than ever before your sense of identity with them, and your sense of duty to the state; if it gives you a higher purpose; if it gives you keener tools with which to do your work, and does not divert your mind from the fact that you are to do that work; if your college education has done all this, it has made you immeasurably better citizens than you were before.

"Above all, do not become of the class of so-called highly educated and cultured who sneer at American institutions and American customs. If you recognize a fault, come forward and expose it, and strive to remedy it. Do not become one of the class who lose faith in the ability of Americans to govern either themselves or their islands."

IN A forcible address before the Boston Chamber of Commerce the Hon. John Barrett, former minister to Siam, testified that Aguinaldo's rebellion against the authority of the United States was incited by the words and deeds of the "anti-imperialists." He said in part:

"I have every consideration for those men who object to the acquisition of the Philippines, and believe that discussion leads us to come to a clearer and truer understanding of the whole situation. I bring a message from the thirty thousand soldiers there, and I say that the injury was not done in the way of hindering our men in their efforts on the field of battle, but in spurring on and giving new life to their enemies.

"Dewey's greatest feat was not that of destroying the Spanish fleet in Manila bay, but that of making the United States respected as a first-class power in every Oriental capital. If you wish to bend your energies for the greatest degree of concord and prosperity which this country has ever experienced, use your strong influence in Boston and New England with San Francisco and the Pacific coast, not only to successfully grapple with the problems in the Philippines, but to maintain the open door and freedom of trade throughout all China.

"I am not an imperialist nor an expansionist in the wanton and unreasonable meaning of these misleading terms, but a simple believer in meeting our moral responsibilities where failure to do so would have complicated us in acts of far greater unrighteousness than those in which we are now concerned; such as, for instance, international war on the one hand or absolute anarchy in the islands on the other hand, in the event, as would have been necessary, that we had left Manila and the islands before stable native government or acceptable foreign protectorate had been established, neither of which could have been accomplished in case of our departure within a year after Dewey entered Manila bay.

"I wish to protest against the most unfortunate influence of this Anti-Imperialistic Society, which has resulted not in reaching to any great degree our military or naval forces, but has given unlimited comfort, aid and encouragement to their enemies. I speak in no exaggerated terms. On the battle-field, along the firing-line and in the camps and hospitals I heard the rank and file of our brave soldiers inveigh against the effect of this agitation on the enemy; from the mouths of not only Admiral Dewey and General Otis, but Generals MacArthur, Anderson, Hale, Lawton and Brigadier-General Otis, Colonels Smith, of California, and Summers, of Oregon, aside from scores of other army and navy officers, I heard the opinion expressed in no uncertain terms that the most encouraging influence for the Filipinos in fighting us, and hence the most unfortunate one for our soldiers and sailors to combat against, was the spreading of the sentiment and ideas through the ranks of the Filipino army and among the masses of the natives that our occupation of the islands was unwarranted, the war unprovoked, our army and navy unsupported by our people, and our country about to demand the withdrawal of our forces from the islands, the hauling down of the flag, and our complete and ignominious withdrawal from our responsibilities—incurred, in fact, not by a spirit of conquest, but by the logical development of war where we had to protect our interests and destroy those of the enemy wherever they came in contact or competition.

"When I think of the regiments losing so many good lives in battles which I believe could have been avoided had the treaty been ratified at an early date, and the Filipinos not been led to believe that by holding out and fighting us they could gain their end, I contend that I am indeed provided with a sufficient excuse to refer to this subject with so much plainness on this occasion.

"Now, last, I must tell you something, as citizens of Boston and Massachusetts, which I dislike to tell you, but still which is true. It refers to the effect of the speech of one of your senators against the treaty. As he is a great and good man, in my honest opinion, I would make no observations whatever against his personal character. I merely relate a few facts. It happened that I was in Hong-Kong the day that the report of this senator's speech against the treaty arrived. Meeting a prominent man connected with the Philippine Junta, I was shown by him with great satisfaction a long telegram which he had just received from Washington. He handed it to me to read. It contained a verbatim report of the most sensational or strongest part of the senator's speech; that was followed by a summary of his other remarks, and that in turn by a statement of the names and number of the senators who were expected to oppose the treaty, and finally concluding with advice to the Filipinos to hold out without surrender or yielding to the Americans. This was so extensive and so well done in its way that it almost stunned me. When I recovered from my surprise I asked the owner of the dispatch what he intended to do with it.

"'Hand it to Aguinaldo, of course, and he will have copies of it distributed through his army and among the people,' he replied.

"I need only add that he did succeed in doing this, although personally I did my best, as did others, to prevent such encouragement reaching the Filipino forces. Gentlemen, you can draw your own conclusions as to the effect of such literature among a people excited as the Filipinos. It was like water for the parched mouth of a man dying of thirst. It did not merely quench the thirst and keep him cool, but it made him a maniac, so that he resorted to fighting and even treachery until death."

AT THE national convention of commercial travelers recently held in Albany, N.Y., were passed resolutions against trusts as "a menace, especially to the employment of commercial travelers." When two concerns making the same articles are combined into one the services of one corps of traveling salesmen are dispensed with. Cutting off useless expense is one of the main reasons for combination. In an article on modern industrials in "Munsey's" the late Governor Roswell P. Flower said: "The possibilities of economy in production are enormous. Recently some wagon manufacturers came to New York to organize for the capitalization of their business. They figured out a reduction of one half of their traveling salesmen by this combination. This and other economies aggregated nearly four hundred thousand dollars, and the net profits of the concerns had not amounted in the aggregate to more than two hundred and fifty thousand dollars within a year. That is what capital combinations are doing for business. They are making it possible for business to be conducted at the lowest rate of expense, because the concern of great capital is independent of the banks, and can even carry its own insurance. Combination is increasing the wages of labor while cheapening the cost of necessities as well as luxuries to the consumer."

A NATIONAL exposition of American manufacturers for the expansion of export trade will be held in Philadelphia, September 14–November 30, 1899. The following special from the department of publicity and promotion briefly outlines the plans of this worthy enterprise:

"The National Export Exposition to be held in Philadelphia this fall will be thoroughly American in tone, and entirely distinctive in scope and plan. Its primary object is the expansion of the export trade of American manufacturers, and with that end in view all that is new and good, that has been, can or may be exported, will be on exhibition. The exhibits will be from the broad-gage manufacturers of the United States who have such confidence in their goods that they know they can compete with the goods made in Germany, England and France which are exported in large quantities to foreign countries. These goods will be shown side by side with samples of foreign goods, so that our manufacturers can compare our products with those of foreign countries. Another department of the exposition will show how to label, ship and mark goods for all foreign countries.

"Another feature will be the International Commercial Congress held in connection with the exposition. This will convene on October 10th, and will have as delegates representatives from all the commercial organizations of the large cities of the world. These men will be business men who will come here to see what American manufacturers make that they can export, and if they find the right goods will be prepared to buy them.

"The National Export Exposition has received the financial support of the United States government, the state of Pennsylvania, and has been officially recognized by the governors and Legislatures of many states. The buildings will cover a space of sixty-two acres, and most of them are now in process of erection. The main building will be a massive structure, covering eight acres, with steel-beam skeleton, and will include under one roof spacious exhibition-halls, restaurant, and an auditorium with a seating capacity of five thousand. There will be over two hundred thousand square feet of exhibition space in the main building. The agricultural implement manufacturers will have a special building one hundred and sixty feet by four hundred and fifty feet in size. In this will be exhibited the latest inventions in farm implements and machinery. In addition to this there will be a field of twenty acres in which road-engines, field machinery, etc., will be shown.

"The National Export Exposition is being well supported by the largest manufacturers of the country, and the leaders in every line will be represented by exhibits.

"The exposition will not only attract many people from foreign countries, but also draw people from every part of the United States. It will be very attractive to the manufacturers of this country, for they will be able to see the latest and best of everything that is made in the United States. It will have many features of interest for the farmer, for there will be congregated the latest in farm machinery and agricultural implements.

"The amusement feature of the exposition will be unique. In addition to the daily concerts in the auditorium by leading musical organizations of the country there will be a number of novel displays on a broad esplanade leading from the entrance to the grounds. This will be eighty feet wide and eight hundred feet long, and on either side will be erected quaint structures in which will be shown the life and industries, the toil and play of people from the Philippines, the Hawaiian Islands, Porto Rico, China and other countries. The Chinese village will contain four hundred and fifty inhabitants who will come directly from China to this country."

REVIEWING business failures "Bradstreet's" of July 1st says: "The intensity of competition in business life and the increasing sharpness of the struggle for success have furnished the theme for many rather pessimistic views, particularly marked since the outbreak of what might be called the trust or combination mania, and predictions of a wholesale pulling down of small traders as a result of modern methods and conditions have been freely made. The influence upon ultimate success in business of the possession or lack of possession of what has been considered essentials of the average trader's success have, of course, received exposition very frequently, and the need of increased capital, of a careful consideration of expenditures, and a multitude of other less prominent conditions, has been emphasized.

"It is particularly encouraging, therefore, and it may well be considered a special index of the widespread activity in trade during the period under review to find that business embarrassments for the first half of 1899 make just as favorable a comparison with preceding periods as did the record of the first quarter of the year. Earlier reports by 'Bradstreet's' apparently indicated that the first quarter of the present year witnessed the minimum of friction or disturbance in general trade, inasmuch as it was shown that in that period the number of failures reported was the smallest there was any record of for seventeen years past, and the liabilities involved were the smallest reported for twelve years.

"The showing for the second quarter of 1899, however, is almost equally encouraging, in that while the number of failures in the second quarter this year has been slightly larger than in some other years, the volume of liabilities involved is the smallest there is any record of since 1883. Records of failures by months show that the failures in June were the lightest and least damaging for any month this year, and a comparison of May and June failures with the same months of recently preceding years show that this year's troubles have been unprecedentedly small, pointing to the continuance of the favorable conditions referred to to the very close of the six-months' period. For that latter period of time as a whole, therefore, the showing is an exceptionally favorable one, pointing, in fact, to the smallest number of embarrassments reported since 1882, while the liabilities of the failing traders are the lightest reported since 1881. Further testimony to the decline of business troubles to a minimum is found in the small percentage of assets to liabilities.

Making Friends

One advantage that the rural American people have over the peasants of Old World nations is that from their very origin and bringing up their disposition is somewhat nomadic. They move about. They live at the colder North to-day and perhaps at the warmer South to-morrow. They try it East, and if they do not find ideal conditions and surroundings there, they go West. Few, comparatively, are those who stay in the same place for life. The consequence is that our people see the world as no other people do. Coming in personal contact with different people, different conditions, different soils and different climes brings to the observing mind a wealth of facts of which it otherwise would have remained in ignorance. Our moving habit, in short, has served us as a substitute for systematic school education. It has sharpened our wits and understanding. It has enabled us, more than anything else, to cast prejudices aside and to take a broad view of things generally.

* * *

Man is a gregarious animal. If he strays out of one flock, so to speak, he at once tries to crowd into another. There are few people so dependent or self-content that they can or care to get along without companions and friends. I think that the good-will of neighbors is a great luxury, and even if I could afford to, I would hate to do without it. It is easy to make new acquaintances. To make friends is a far more difficult task, and not everybody has the knack to accomplish it. It is only very recently that I have learned more clearly to see through it and through all its connecting phases, and I believe I can aid my friends to a full understanding of the secret. And then let us practise what we preach and believe in.

* * *

Suppose you come a stranger into a new place. It is true the people there will be polite, courteous, even accommodating to you. That is the character of the American people. And yet they are prejudiced against you all the same. So are you prejudiced against them. Everybody is prejudiced against a stranger. For instance, a man might come to you offering you a really meritorious article that you would quickly buy of an acquaintance at the same price or even a higher one, and yet you refuse to take it simply because the man is a stranger to you. After having bought of him reluctantly a few times you lose your prejudice and buy freely less meritorious articles. Criticizing eyes, too, are upon the stranger. Peculiarities of expression or in appearance that pass unnoticed among old acquaintances are an object of comment, and possibly of objection, when seen in a stranger. The ways of your new neighbors appear odd to you. You are probably used to different ways. But don't forget that your ways appear just as odd to the neighbors as theirs do to you. All this will disappear with better acquaintance. Now, however, I come to the real secret of the art of making friends, and of earning the good-will and respect of your new neighbors. Do not try to "show off." Rather run the risk of appearing in the role of the ignoramus. Think a good deal, and say little. See everything, but do not make any comment except to yourself. If you are smart, the people will find it out without your trying to show it. A husband cannot increase his wife's respect and love for him by bragging of his mother's cooking. It is an indirect way of finding fault with the wife's cooking. When you try to make out that you are awfully smart, and that your family is so nice, and your old neighbors so wonderfully good, the new neighborhood, of course, will take it as a reflection on their own smartness, on the nicety of their families, and on their own goodness, and will resent it. I used to live where the nightingale dwells, and always have noticed that she hides in the depth of the bushes and selects the stillness of midnight when she wants to warble forth her most delightful melodies and trills. The jackass, on the other hand, shows off his clumsy pranks, and sounds his offensive bray on the highway in full daylight. Wouldn't he hide deep in the forest if he could see himself as others see him?

* * *

Just imagine the results of the following plan. Come into a new neighborhood. Carry your head high. Make believe you know everything worth knowing and a little more besides. Tell everybody of the goodness of your old neighborhood. Also how wicked the people are in the new place. Brag up your children, your sisters, cousins and aunts. Tell of the good old stock you came from, and what great things you have done and still expect to do. If that does not make you ridiculous before the whole new neighborhood I do not know what would. You may be sure, however, that no matter how nice you might try to be with your neighbors otherwise, and how accommodating, if you follow such a course you might as well pack up your duds again and move out. It will be next to impossible to gain the good-will of that community.

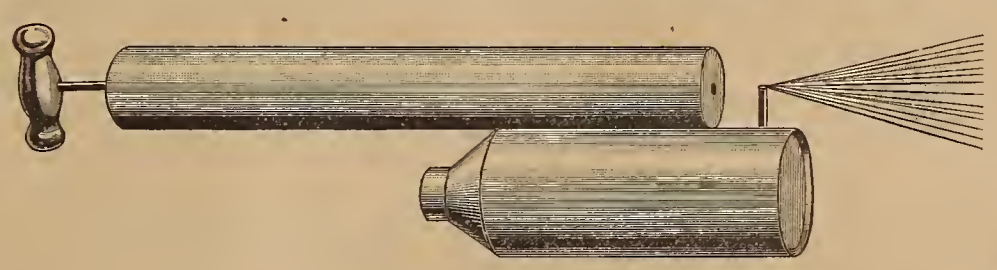
* * *

But try the opposite course. Say nothing, and saw wood. Go quietly about your business. Trust to the revelations of time, which will soon show what stuff there is in you and your family. You may be anxious to show your real worth. It will come out in time without any effort on your part. I know you would like to tell of your children; how quick they are to learn and what progress they make, or how well they can play the piano, or recite and sing. All these are things very near to your heart. But forbear. Restrain your pardonable pride. Keep all this treasured up in silence until the neighbors themselves begin to talk about your children's accomplishments. And then say little. Be a ready listener at all times. Muster up all patience possible to hear others talk about their children. Give a word of praise where you consistently can, and think what you like. And then round off this course by treating everybody on the square. That is the way to make friends, and it is better to have friends than enemies, even if you expect no particular services from the former, nor have any reason to fear the latter.

* * *

A Small Hand-sprayer

In the issue of June 15th I mentioned a hand-sprayer, or rather atomizer, which can be bought in general hardware and seed stores at from fifty cents to one dollar and a half or two dollars apiece. Such a spraying device is shown in the accompanying illustration. The one I use is made of copper, and therefore more expensive, as also more durable, especially for spraying corrosive liquids, than the tin affairs costing fifty cents. It is offered by the manufacturers of spraying outfits in Lockport, N. Y. It



throws only a vapor spray, but I noticed that its spray, the receptacle being filled with white hellebore in water, was all-sufficient to make a speedy end to the worms which it had been such a job to keep off my Columbus gooseberry-bushes by applications of tobacco and even kerosene emulsion. Use a little more hellebore in the water than usually recommended (a tablespoonful to the gallon), and apply thoroughly so that every leaf receives its share. For the few bushes, roses and shrubs that ordinary people have in their gardens, lawns, etc., this sprayer is a good thing. I use mine mostly for spraying pure kerosene or a mixture of this and oil of tar on cattle and hogs, sometimes on horses, to drive and keep the flies off. The little twenty-five-cent tin sprayer required so much lung-power that I am very glad to be now relieved of the necessity of blowing. The other day when I found a lot of those great lice on my hogs, I loaded up the vapor sprayer with kerosene, went into the pen and gave each hog a thorough spraying, afterward rubbing the oil well in with the hand. I have repeated the operation once or twice since, and the hogs are not troubled with lice any more. I also use the same machine and material to keep the hen-house free from mites. One must be quite persistent in using it for the purpose. Ordinarily I prefer to spray the inside of the hen-house more freely with the knapsack-sprayer.

T. GREINER.

SALIENT FARM NOTES

Farmed to Death

"Land runs together very badly this season. I got that twenty-acre field in splendid condition and planted just before that last rain, but the surface is baked so hard that the corn cannot come up." So said a young man who is farming rented land. He says he is having a "dickens of a time" in trying to get a stand of corn. He has plowed the land twice this spring, and planted it twice, and now the surface is baked so hard that the sprouted corn cannot get out. He is harrowing it to break up the crust, and after all of his hard work will probably succeed in securing about half a stand.

* * *

He is farming land that has been farmed to death. Its owner leases it to whoever will pay three dollars an acre rent, and each tenant does his utmost to wrest from it every atom of fertility that it will give up. The result is what might be expected; the land is entirely devoid of humus, lifeless clods, like putty when wet and like brick when dry. To grow a half crop on such land requires ten times more hard work than to grow a full crop on land that has been properly treated and is well supplied with humus. This shows the great disadvantages the tenant-farmer has to contend with. He must grow a crop that will sell to pay his rent. A fertilizing crop like clover, cow-peas or soy-beans is out of the question, because the landlord wants his annual rent, and he wants it from every acre he owns. Very often the landlord and his agent (usually a lawyer) know no more about fertility or fertilizing than posts, and the skinning, extracting process now so much in vogue will be continued until the last vestige of available fertility is removed. I feel sorry for both tenant and land.

* * *

After Wheat

After the wheat and oats are cut comes ragweed. If the land is wanted for corn the following year it is customary to let the ragweed, smartweed, etc., take it after harvest and fill it with seeds that will spring up with the corn and harass the husbandman not a little. If the land is intended for another crop of wheat it is plowed as soon after harvest as possible, and allowed to lie bare until seeding-time. The practice of some of the best farmers is to plow about three inches deep as soon as possible after the wheat is off, then disk and harrow after every shower until seeding-time. This keeps the surface mellow and prevents evaporation from the subsoil, and also in a measure prevents the escape of nitrogen. Those who follow this system or plan of growing wheat after wheat two or three years in succession have learned that two things are necessary to success: To plow the land immediately after harvest, and to keep the surface loose and mellow all the time until the seed is put in. If the soil is allowed to become dry and baked after a shower there is trouble on hand. It must be disked or harrowed, preferably the former, as soon after a rain as it will work mellow.

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Nitrogen Trap

Scientific farmers are learning, however, that this is not the best plan to follow. Nitrogen is a costly element of fertility, and it will not do to allow an atom of it to escape if there is any means of preventing it. These men are using a trap to prevent the escape of nitrogen—a trap that not only prevents the escape of the nitrogen already in the soil, but adds more to it for the use of the succeeding crop. This trap is the cow-pea. As soon as the wheat or oats can be removed from the land it is disked two or three times over, or plowed about three inches deep and harrowed, and cow-peas put in with a drill corn-planter, straddling the rows, or with a wheat-drill with alternate seed-holes stopped up. The peas are up in a few days and make rapid growth and soon cover the ground. They may be pastured in the fall or turned under for fertilizer the following spring. Try this plan on a half acre or an acre this season and see if it is not the thing to do—see if the results are not more than satisfactory.

Fly-repeller

I milk in a darkened stable and am not annoyed very much by flies; still, when I open the door to let the cow in a few hundred flies rush in after her, or ride in on her back and legs. The pestiferous little black fly that came up here from Texas is the meanest of all. It gets in among the hair on the sides and back of the animal, always with its head downward, and there it sticks until rubbed off. It is about as hard to mash as a grain of wheat, and it annoys the animal more than all others. But I have got onto the lad at last, and he perishes miserably and in short order. I load my little sprayer or atomizer with kerosene, let the cow into the stable and close the door, then blow a few whiffs of the kerosene vapor along her sides and back and on her legs, and the way those villainous flies let go and tumble is a caution. Then a few puffs into the air and every fly that is able tumbles through a crack to get outside as quick as possible. Before turning the cow out in the morning I blow a few puffs of the kerosene vapor on her back and sides and they don't trouble her for an hour or more. A little heifer that used to run every time I approached her now stands still while I relieve her of her tormentors by blowing the vapor over her sides and legs. They soon "catch on," even if they are a little wild at first. In the stable I allow the vapor to settle, which it will do in a few minutes, before milking.

* * *

Hot-weather Food Drink

When hard at work in the field on hot days I sweat like a fretting horse. It fairly runs off me, and water seems to have little effect in quenching my intense thirst. I have tried all sorts of drinks—cold, warm, hot, sweet and bitter—and the best of the lot is the juice of fruit, black raspberries or blackberries being best of all. A pint of the ripe fruit is poured into a quart of water in a stew-pan and set on the stove. It is taken off before the fruit goes to pieces and strained, and a very little sugar added. One pint of this in one half of a gallon or one gallon of water kept as cold as possible is good, and goes farther in quenching thirst and keeping my stomach in good condition than anything I have found. Then three or four cherry, plum or prune stones kept in the mouth while at work are of great assistance in quenching thirst, very much better than chewing-gum of any sort.

* * *

In hot weather I have found it by far the best plan to eat a very light breakfast of wheatlet or steel-cut oats thoroughly cooked the previous afternoon, with bread and butter and fruit, and little, if any, meat, then have a lunch about half-past nine. I notice that those who follow this plan seem able to do more work and stand the heat far better than those who eat a hearty breakfast of heavy food and get no more till noon. If a man has a stomach like an ostrich he can fill himself up to the chin with bacon, cabbage, potatoes, etc., with impunity, but the ordinary man—he who must work steadily and think clearly—should learn to treat his stomach scientifically; to supply himself with such food as will keep him in good health and working condition. A farmer should be the healthiest man in the world. He has pure air, and can have good, wholesome food and drink if he will, and at such hours as he elects.

FRED GRUNDY.

AGRICULTURAL SOCIETIES

The first society for the promotion of agriculture was founded in 1785, in Philadelphia, with Washington and Franklin among the charter members. In 1792 a professor of agriculture was appointed for Columbia college, New York. In 1837 Congress made the first appropriation in the interests of agriculture—one thousand dollars for the collection of farm statistics. This was brought about by the disastrous crop failure of 1837. In 1849 Yale college established a course of lectures in agricultural chemistry. In 1855 Michigan established a college for agricultural training. In 1857 Senator Morrill introduced his bill to establish agricultural colleges. It was vetoed by President Buchanan, but practically the same bill was signed by President Lincoln, in 1862. The first experimental station in the United States was established by Yale college. Harvard soon followed with another. The state of Connecticut assumed charge of the Yale venture, and the state of Maryland opened a third station. In 1887 Congress appropriated $15,000 annually to each state for experiment work, and in 1890 increased the endowment of the agricultural colleges.

E. P. POWELL.

OUR FARM

FARM THEORY AND PRACTICE

FOUL CLOVER-FIELDS.—The crop reports and some travel reveal the fact that tbere is a big acreage of weedy clover-fields this season. When such fields are in close crop rotation that calls for corn or potatoes next year it is unwise to let them lie and produce a crop of weed-seed. Weedy clover has little valne as feed. and the soil needs a good sod or a good manurial crop to prepare it for the next plow crop. The best plan is to break such land early in the summer, before the weed-seeds ripen, turning the growth under for a fertilizer, and then seed to some other manurial crop that grows quickly. There is the expense of an extra breaking of the land and the cost of seeding, but the advantage in improvement of the soil and the destrnction of weeds counterbalance all that. Where crimson clover and southern field-peas tbrive, either of these make a grand renovating crop. Each has the power of takiug nitrogen from the air and adding it to the soil iu the same manner that clover does this work for the farmer. July is too late for seeding to cow-peas in tbe North, but is the best time for crimson clover. If the latter is used, the seed should be northern-grown. One peck of seed to the acre is the safest amount. The ground shonld be well firmed before seeding to insure moisture, and the seed should be covered to a depth of two inches. Where neither of these leguminous crops do well, the best plan is to keep the ground clean until the last of August, and then seed to rye. This will make a heavy sod for the next spring. Such catch crops as these are essential in fixed close rotations, when clover partially fails and weeds begin to take the land that must be used for a plow crop the next spring.

* * *

PROFITABLE GRASS-LAND.—Tbere is a fair prospect for good profit from clean timothy meadows this year. The man that fails to have all mowing-land clean makes a mistake if the hay is intended for market. It is surprising that the practice of cleaning meadows of weeds several weeks before harvest is not more general. A man with a sharp scythe can clean a big area of grass-land if it is not so foul that it should be left for meadow. If the meadow is not worth cleaning it is not worth keeping for harvest. An active man will clean two or tbree acres of moderately weedy land in a day, using the point of the scythe to cut the weeds a few inches above tbe ground. The grass then springs above the stub, choking any branches that start, and there is an increase in both quantity and quality of the hay. Bright, clean hay promises to command a good price the coming season in most sections.

* * *

THE SPUD.—A great convenience upon a farm is a spud. As some readers may not know tbis implement by name, I may say that it is a steel blade set chisel-fashion into a long handle. Three sixteenths steel cut two incbes wide is about right. The blade should be four or five inches long, and may be fastened in an old fork-handle. It sbould be kept sharp, and is then a handy tool for cutting out such weeds as the dock, plantain. etc., that must be cut below the crown to be killed. Such weeds are apt to appear around farm buildings, and mowing does not kill them. A sharp spud is a most satisfactory tool, and tempts one to constant warfare with all unsightly weeds on the grounds about the house and barns.

* * *

NON-BLIGHTING POTATOES.—Some varieties of potatoes are far less susceptible to blight than others, and the quality of resisting the attack of early blight should now be regarded as one of prime importance. Year after year this blight has ruined crops in some potato-growing sections until a full yield is no longer expected. The disease has been spreading nortbward, appearing in New York state and Michigan. Spraying is the only remedy proposed, and it is only half a remedy, often failing to stay the disease. Spraying is costly, and will not come into general practice for many years, if ever, though some farmers find that it pays. The important thing now is the origination of some productive variety that has ability to resist this disease. I have faith that this work can be done. I now have a few varieties that often escape blight entirely when other varieties by their side are attacked, and always resist an attack for some days, if not weeks, after some other varieties have succumbed to it. Among the least resistant is tbe Early Ohio. Among the most resistant, I think, are those varieties that send up a single stalk from an eye and make no branches nntil rather late. in the season. The fact tbat this wide difference exists gives room to hope that wben originators of new varieties begin to watch this point tbey may select some varieties that will be more resistant than any we now have. Even if a seedling were not as productive as the best, it might be very valuable because germ-proof, and makes growers more money tban a potato that was naturally more productive but quick to blight.

* * *

DOES IT PAY TO HOE?—Tbe use of the hand-hoe has gone rapidly out of date in recent years. The idea is that all tillage should be given by horse-power. Tbe harrows, cultivators and weeders do splendid work. But I questiou whether we do well to discard the nse of the hoe in some instances. Wben potatoes become too large for the weeder, the only way to freshen the soil in the hill by horse-power is to throw soil out of the middle into the hill. That forms a slight ridge. Another cultivation ridges the ground yet more or else a crust is left about the plants. I believe that a tborough hand-hoeing at this time, stirring all the surface of the soil abont the plant and leveling the ridge slightly without cutting deep, pays well. In many instances it would doubtless increase the yield sufficiently to pay very big wages to the workman. Tbe hoe has been discarded on level lands, and a retnrn to it might not seem progressive to many people, but the owner of clayey loams too often has a crust of bard soil about his plants at the last cnltivation that should be broken, and the hand-hoe is the only implement that can do the work right and leave the land reasonably level. I believe so strongly in tbe doctrine that thorough cultivation pays that each year I find more and more work for the hoe. The man that is skilled in its use can do much profitable work with it.

DAVID.

THE OSAGE ORANGE FENCE

In the earlier days when the farmers from Pennsylvania aud the East and the Ohio valley began to spread ont still fnrther west to the rich prairie-lands across the Mississippi, after a homestead was staked out and a lodging provided, one of the first things was to provide a permanent boundary for tbe new farm. Wood was too valuable to be used for fencing, and the areas to be inclosed were large. So the Osage orange took the place of the rail or board fence. Miles and miles of this hedge were planted, making tough, impervious fences, which grew evenly around the farm.

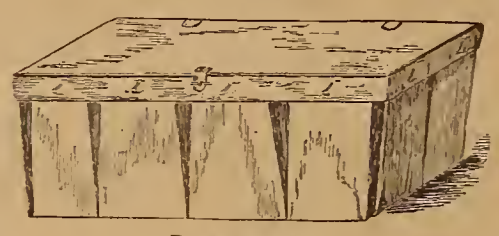
Notwithstanding the statement of many farmers that they would not have a bedge, and especially the Osage, on their places, I bave yet to see a fence which I like better, consider more ornamental, or, year in and year out, more economical. My farm is located on the stubborn red land of Virginia, but my Osage hedge, fronting tbe entire place, gives me bnt little trouble, makes an excellent fence and is a tbing of real beauty in the summer. As I wanted a tight fence, I set the plants, six years ago, five incbes apart, having thoroughly prepared and enriched a strip of ground four feet wide to receive them. I cultivated tbis long strip of small plants much as I would a row of onions, as many as eight or nine times a season, using tbe wheel-hoe in between cultivations with the horse. The hedge is now shoulder-high and has the dimensions I propose to keep it. I trim it twice a year, using a machete which I brought home from Nicaragua several years ago. A corn-knife would do. I can trim one hundred yards an hour, taking the growth when it is just right; that is, wheu the shoots are green and tender. If left until they harden the job will be a trying one. One place in the hedge, immediately in front of the house, I had some trouble with. It did not start off right in the first place, and it was two years before I realized what was the matter. Five or six cedar-trees grew outside of the hedge on railroad land, and I noted that the hedge began to diminish as it approached in front of these trees, and that at the point immediately in front of the clump it was the poorest and weakest. The tree-roots were robbing it of the moisture required for its roots, and the extra manure I had applied did not help much. I plowed a furrow about six feet wide outside of the hedge, between it and the trees, and ran back and forth in it several times, going down eighteen incbes and cutting all the tree-roots. The effect was marked. This weak section began at once to crawl up after the rest of the hedge, and now the whole hedge, having been cut back many times since there is no appreciable difference.

This root-cutting suggests sometbing. I have heard farmers complain that they cannot stop always to prune their hedges, not being "gentlemen" farmers, and they become neglected, and tbat after leaving them untrimmed for three or four years, until they are great bushes, they can plant nothing near them, as the hedge "draws the grouud." In such a case the first thing to do is to cut back the hedge to where it belongs. Then with a heavy two-horse plow, and with an ax handy, run a furrow on either side of the bedge, about five feet off, to a deptb of fifteen inches, and cut all tbe roots. No trouble will be experienced now in growing crops up to the line, nor will the severe root-prnning hurt the hedge; it will only balance the top-pruning which has been necessary.

GUY E. MITCHELL.

THE STRAWBERRY SEASON OF 1899

Of some sixty new and so-called new varieties which fruited witb me this season more thau one half of them gave promise of taking a place more or less promineut among desirable sorts. Many of them, however, fruited for the first time, and the result is given here without comment, for it would be manifestly unfair to either commend or condemn them until after further trial, particularly as the prolonged drought and the unusual hot weather at the season of ripening wrought havoc among many varieties. Indeed, had it not beeu for a modest irrigating plant, the beginning of what is hoped will be a perfect outfit, this report could not have been made at all with any degree of fairness. The varieties ripening late fared better tban the early and midseason sorts, as tbey were on "late ground," whicb is fairly moist even in seasons of prolonged drought, and wbich is selected in order to bold off ripening as long as possible. Our soil is a

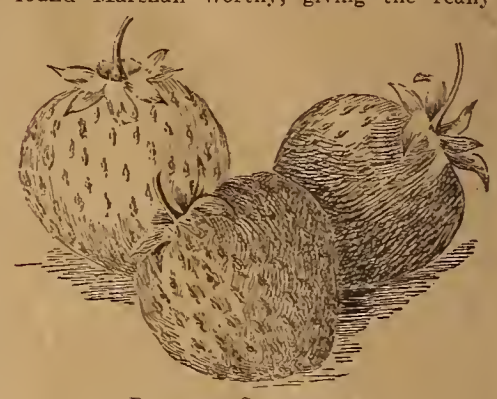


BERRY-BASKET

light sandy loam, and wbile but few plants of many of tbe varieties are under test, the cultivation is precisely the same as with areas of greater extent. The markets have given us a fair price for good fruit attractively packed, probably an average of twelve cents a quart gross for those shipped, and nine cents for those sold in the local markets—the very early and the late as usual bringing tbe best prices. These prices were for good fruit packed in clean quart baskets and put on tbe general market, and not for fancy fruit.

As usual, I made an effort to get into the "select" market by shipping choice varieties, berries of uniform size and all large, and was fairly successful in returns, quite enough so to warrant the belief that in a normal season I would have made considerable money. Tbis year I made an experiment with a basket holding not quite two quarts. This basket, shown in the illustration, was made about the same depth as an ordinary quart strawberry-basket, but nearly double the length. It has a cover of light splint fastened at the back with tin binges, after the manner of the covers on grape-baskets. In these special baskets I packed the very choicest fruit, lining tbe baskets with rose-colored crape-paper, which came over the edges about an inch on all sides. Only the largest and finest berries of uniform shape and size were selected, and these were placed one by one in the baskets. This fruit was intended for the fancy city trade, and was shipped by express in a locked crate. The returns were even better than I expected, the fruit selling for thirty-five cents a basket when first-class herries not so well and attractively packed were bringing not over ten cents a quart. The basket described did not hold much if any more over three pints, but its odd size and unique packing, together with the fine fruit, sold it readily. I understood these baskets of fruit were quickly retailed at fifty cents each, and I was asked to supply more, which the dry season prevented. "They were not worth the price they sold for," you will say. True, but they were bought by people who did not find it necessary to count the cost and who will always have tbe best. It needed but a glance to show them that the berries were really fine, while the arrangement and the packing showed care and taste, which are always appreciated by those who can afford to pay well for anything first-class. It will be understood that tbe venture was wholly an experiment, and as the boxes and crates were made to order they cost many times more than the ordinary thirty-two-quart crate and baskets. Still, the margin of profit left me a fair reward for the fruit and labor, and more than all was one more demonstration that extra fine fruit well and attractively packed will sell for enougb to give good returns for the labor involved. I will double my shipments in this line another year if the conditions are at all favorable.

Among the new old sorts that have been cultivated for more than two seasons I found Marshall worthy, giving the really



PRIDE OF CUMBERLAND

high culture it demands for the best results. The berries are of very large size, uuiform in sbape and first-class for home markets. It can be shipped and will carry well sbort distances if picked while perfectly firm and kept cool until put on the cars. It is not, however, a variety tbat will carry long distances and stand up well, especially if it is in the least overripe.

Clyde has done wonderfully well on my soil this year; the only objection I have to the variety is that the vines grow so rampantly it is hard for the sun to get among them sufficiently to ripen the fruit evenly. The berries are of fair size, early, of good color and flavor, and produced abundantly. This is my third season with the Clyde, and I consider it one of the varieties that has come to stay.

Nick Ohmer has again done well on my grounds, better, iudeed, in ordinary field culture than when given bigh culture, the fruit being more regular in form, altbough it is more or less misshapen. It is one of tbe firmest large berries I have grown, and in ordinary seasons would, I think, stand long-distance shipping. This year it wilted somewhat, owing to the excessive hot weather. Tbe berry is dark red, but of only fair flavor with me, though it has been described as of particularly fine flavor. Reports from other sections of the country speak highly of the berry, and on the whole it would appear to be worthy of culture generally.

Seaford (see illustration) was fruited for the first time on plants a year set, and it promises well, although I think it will do better on soil a little heavier than that I can give it. The growth of the plant is vigorous, and the crop of deep red fruit of good size is borne early and in abundance. Its quality is the strong point of the variety, to

JERRY RUSK

SEAFORD

my mind, and in this it is superior to anything on my grounds. It seems to be worthy of extended trial.

Ella fruited for the second year, but with me it is of little valne, the only thing in its favor here being its earliness.

Gladys originated in Ohio, and is full of promise. The growth of the vine is vigorous aud fruit is produced abundantly. The berries are rich, red, glossy and of good size and regular in form. I think cuough of the variety to extend the acreage.

Pride of Cumberlaud, which is shown in the illustration, is one of the most prolific varieties I have; too much so, in fact, for it is inclined to run to small berries unless the fruit is thinned. It is a week or ten days earlier than Gandy, and is an unusually firm berry, which is the main thing in its favor, as the size and quality are but ordinary.

[CONCLUDED ON PAGE 7 OF THIS ISSUE]

NOTES FROM GARDEN AND FIELD

MANURING FOR MOISTURE.—At the time of this writing we are having our usual dry spell. I can remember but few seasons during which, at some time or other, we have not heard wailing over the lack of moisture in the soil. Yet we go on year after year without making better preparations for supplying moisture to the soil, in the vain and foolish expectation that rains hereafter will be more abundant and regular. I expect to see these periodical returns of long dry spells as long as I live. The one means of providing the soil with a coutinuous supply of moisture during any drought of reasonable length, the means most simple and practicable, is to fill the soil with bumus. We can accomplish the object sought by applying heavy dressings of rotted or half-rotted stable manure, to be thoroughly worked into and mixed with the soil by plowing, harrowing, replowing, etc. This decaying vegetable matter, as every farmer and gardener should know, but does only half appreciate, holds water like a sponge. If we then preserve this moisture by thorougb cultivation, that is, by a soil or other mulch, we are in a fair way to success. We cau even grow a fair crop of early potatoes in this manner without a drop of rain from the time the plants have appeared above ground to that of harvesting. It has been done without rain between planting and digging. And it is not much of a trick, either. To grow a good crop of radishes, table-beets, cabbage-plants, lettuce and other quick-maturing crops we need no rain (or rather, can dispense with rain) after we have sowed the seed in fairly moist soil, always provided that we have taken and continue to take the precautions here mentioned for the preservation of the moisture already in the soil.

* * *

We should not imagine, however, that we have done our duty for some years after having applied one heavy coat of manure one year. These quick-maturing crops need a full supply of available plant-food, and just as soon as I shorten the application one year I can see a difference, and afterward wish I had been less saving with the manure. In short, for garden crops I find annual heavy dressings absolutely necessary. The falling off of the crops when such application is once omitted is at once noticeable and great. I have to keep the manuring up or suffer the consequences. The crops which require a whole season to come to maturity do not show the difference to the same degree. I may be able to grow good crops of tomatoes, potatoes, corn, mangels, etc., on land that has had one or more manure applications in previous years. Tomatoes and corn can stand a great deal of heat and drought. For the other crops named, and even for garden peas and beans, I feel that it is an unsafe procedure to omit heavy dressings even a single year. Neitber do I intend to ever try to agaiu.

* * *

MULCHING FOR MANURE.—The next best thing, or to be practised in conjunction with the other, is the plan of mulching with coarse manure between the rows and plants in the rows. I have spoken of this a year ago as "carpeting the garden." If you want to see what effect heavy manuring by mulching can have on the soil and the growth of crops, I would like to have you come and take a look at my Columbus gooseberries at this time, and to note the abundant moisture with which the soil under the mulcb is provided even in this hot, dry spell, and also the wonderful thrift of the bushes and the enormous size of tbe berries. Some years ago I once asked the horticulturist of tbe Geneva experiment station to explain to me how he succeeded in getting such a growth of wood and foliage, and sucb crops of berries on the gooseberry-bushes then growing on the station's experiment grounds. I got no particular satisfaction out of the reply I received then. But I have now discovered the secret or key to the fullest success myself. It is this self-same heavy mulching. I put nearly a wheelbarrow-load of coal-ashes (probably containing some wood-ashes from the kindlings) around each bush, and in the spring again put on a beavy top-dressing of the saw-shavings that had been used as bedding for my hogs. It is put on so thickly that the whole ground is covered, and but few weeds have been able to come through. Early spring rains have soaked some of the plant-foods out of the mulch and carried them down into the soil, leaving a clean surface to walk on. As I said, it is like walking on a carpet. The wood growth under this treatment is such that the only problem seems to be how to keep it within bounds. Severe pruning is needed all the time. But what berries! It is a real pleasure to grow such fruit, and I feast my eyes on the sight every day.

* * *

The gooseberry, bowever, is not the only crop that thrives by mulching in this way. Currants and other bush-fruits will make the same wonderful growth, and strawberries, where the spaces between the rows and between the plants are covered deeply with mulching material of some such character as I have used for my gooseberries, will show a remarkable thrift of foliage, abundance of large-sized fruit, and all this in spite of the dry weather. Raspberries and blackberries need moisture about as much as other fruits, but can perhaps get along with less plant-food thau some other crops. If the soil is already in fairly fertile condition I use old corn-stalks, weeds, spoiled hay, straw, etc., to mulch with. I have these odd corners that are overgrown with weeds. A little work swinging the scythe will not only improve the appearance of the neglected spots, but will also furnish us a lot of good material with which to mulch our berry-patches, and thus helps to furnish the bushes the needed moisture, and some food besides. It helps the appearance of the whole garden and of the whole premises, gives us better fruit crops and adds a great deal to our enjoyment of country life, and of life generally. We would all rather walk on rugs and carpets than on a hard and ragged pavement.

* * *

I go still further. There are other crops which it will often, or rather usually, pay to mulch during the growing season. Early potatoes are one of them, as I have repeatedly mentioned. Our usual summer drougbt comes just at the time when the tubers are forming, and at this time an especially large and constant moisture supply is needed. Why not use the coarse mauure then accumulating in the barn-yard or outside the stables for this purpose? It has to be taken to the fields or garden at some time. We may as well put it out to bear interest at once.

* * *

The time it would take to cultivate the potatoes can be utilized to greater advantage in spreading the strawy stuff all over the ground around the potato-plants so that not a bare spot is to be seen. Let the layer be thick enough to keep the weeds down. I can assure you that this will bring you the potatoes. If you have an especially choice late kind, by all means treat it in the same manner. The plan is somewhat similar to that of growing potatoes under straw, as frequently practised where straw is very plentiful and not as much appreciated for bedding and manuring as it is with me.

* * *

For late cauliflowers (and perhaps late cabbages, too) I hardly know how I could manage to do without the mulch. Cauliflowers like cool soil and plenty of soil moisture. The mulch of coarse manure fresh from the stables secures these conditions, and also helps to feed the ever-hungry plant. When the mulch is once put on we have done nearly everything that anybody could do for the plants. There is no more hoeing, no more weed-fighting, no watering. Rains will come sooner or later and furnish what the plants need. You will not often fail of getting good cauliflower-heads when you treat the plants in this manner. T. GREINER.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

BUDDING

Budding as generally used is a much simpler operation than grafting. It is almost the only method used for propagating peacbes at tbe North, and is commonly employed to a slight extent in propagating apples, plums, pears, quinces, roses, etc. It is performed when the season is about half gone. The plants operated ou should be growing so fast that the bark will readily separate from the wood, and the buds inserted should be of good size. In practice the time for budding peaches, apples and pears is about the middle of August, and for Americana plums about the first of August. The latter must be budded early, as they stop their growth early.

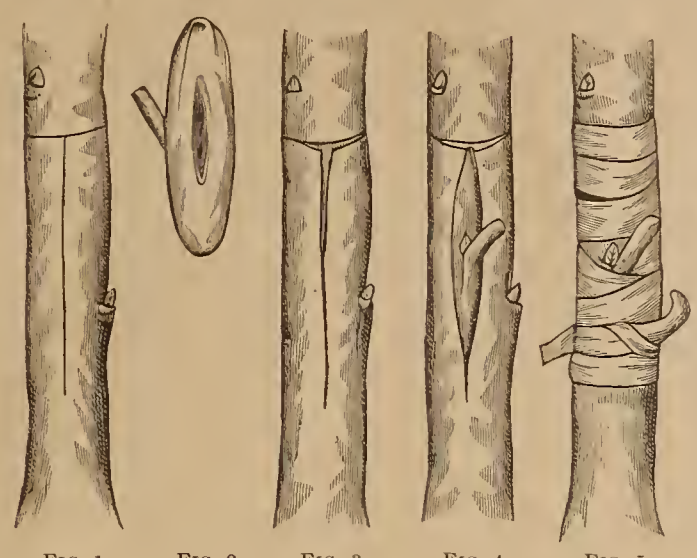


FIG. 1 FIG. 2 FIG. 3 FIG. 4 FIG. 5

The process consists of cutting off buds from an improved peach, for instance, and inserting them under the bark of a seedling after first making a T-shaped cut in the stock. Fig. 1 shows a stock cut ready for the bud; Fig. 2 shows the back side of a piece of bark with bud on it which has been cut off; Fig. 3 shows bark of stock raised a little so that the bud can be slid down from above; Fig. 4 shows tbe bud in place, and Fig. 5 shows bud tied. The tying material may be either raphia, woolen yarn or cotton warp. If the operation is successful the buds will have grown fast inside of two weeks. They should not start into growth until uext season, but the ties should be looked after and be loosened if they bind too tightly, and when the wouud is entirely healed the bands may be removed. The followiug spring the stocks sbould be cut off just above the bud. No wax is used. In cutting the buds it is necessary to take a very thin piece of wood with the bark. Some persons prefer to take out this piece of wood before inserting tbe bud, but in my experience I have found it best not to do so. A tbin knife is desirable. Several complete articles have appeared in these columns during the last few years, and this is purposely made brief.

INQUIRIES ANSWERED

Worms on Strawberry-plants.—W. J. M., Mountainville, Va. If the worms eat the leaves you will find it best to spray the leaves with Paris green and water or dust them with Paris green and flour, as for potato-bugs. If the white worms you refer to eat tbe roots, you will find that they will not be troublesome if the land has been in some cultivated crop for two years before planting strawberries. You should state in your letter just the part injured and send sample when you can.

American Spikenard.—J. C. writes: "Please tell me of inclosed plant. It is about five feet high and has dark-red stem, from which smaller stems extend. The leaves lie flat, as if on the ground, and cover a large space, but do not overlap. It has a cluster of dark-red berries later on. It is valuable for medicine."

REPLY:—It is commonly known as American spikenard (Aralia raremosa). The root has been used in medicine, but is of little value.

Insects and Fire-blight.—E. L. I., Silver Creek, Neb. I am not certain as to what has caused the injury to the leaves you sent. It appears to me, however, that they must have been eaten by some insect, and they look as though, in addition to tbat, they bad been whipped in a very hard wind.——I tbink that the cause of the twigs dying back is the ordinary fire-blight, which is quite severe iu the West tbis year, owing to the very humid condition of the air. There is practically no remedy for this disease. The best treatment is to cut off the diseased parts as soon as they appear.

Injured Pear-tree.—M. M., Rockland, Mass. I think the injury to your Clapp's pear is due to some fungous disease, but tbis may be caused as a result of its being poorly located, as, for instance, being crowded or there being too much water at tbe root, or from anything that would bring about conditions not conducive to a healtbful growth. The injury that you speak of I do not think is caused by tbe regular pear-blight, but it may be. In any case, the best thing for you to do is to secure plenty of good drainage at tbe root, keep the soil well stirred around the trees aud give plenty of air. Varieties of pears that are so sensitive in your sectiou that they will not grow without continual coddling are hardly worth hothering with. It would be better for you to set out some of the more thrifty-growing varieties, such as the Bartlett, B. Clairgeau or B. Anjou, rather than to fuss with this one. It is very likely, however, that another tree of the same kind would show more vigor.

Excelsior Crab-apple — Reine Hortense Cherry—Althea.—L. B., Monett, Mo. The Excelsior crab is of large size and an early bearer, and of fair quality to eat out of the hand for a crab, but best adapted to kitchen use.——The Reine Hortense cherry is a tree of very haudsome, healthy, vigorous growth, of moderate and regular heariug qualities. The fruit is very large and of brigbt clear red, marbled and mottled with some yellow. ——Tbe cultivated kinds of altbea cannot be depended upon to reproduce tbemselves true from seed. It is customary to grow it from cuttings made up in the fall of the year or by layers put down in tbe spring or summer.

Currants Dropping.—J. S., Park Ridge. The reason currants have fallen from tbeir stems I have not as yet heen able to satisfactorily explain. It seems to go with some varieties much more than with others, but is more liable to injure varieties that are crowded or tbat have made large growth of wood and set too mucb fruit. This year my Stewart and Red Dutch are somewhat troubled in this way, but tbe Versailles, Long Bunch Holland and Fay and some other varieties have perfect buuches. I think that where the hunches have plenty of room, and the plants have a reasonable amount of pruning, they are most apt to have perfect bunches.

Scale on Orange-tree.—W. H. M., California. Mo. The orange-leaves wbich you send are infested with a scale-insect. There are a large number of such insects tbat affect oranges and other trees, hut this is not especially injurious if looked after. The best treatment in your sectiou would probably be to wash the leaves with strong soap-suds in which a very little kerosene has been put and tboroughly mixed tbrough the water. Each leaf and twig should be washed separately, using a sponge. Or if they are at the base of the leaf-stalk, an old tooth-brush is very good to reach them with. One good cleaning will probably rid tbe plants of tbis disease, so you will not uotice it for a long time. If on washing-days you would dip tbe tops of the plants into the soapy water several times you will find it would aid very much in keeping them healthy.

Worms on Maple.—J. C. Y., Otego. I do not know wbat worm you refer to as eating your maples, but if you will send me a specimen in a tight box I will try to name it for you. It is very probable that these insects pass their pupa state in the bark or around the base of the tree, and if a baud of hurlap were wrapped around the tree you would probably find a good many of them under it after they begin to spin. If you watch them very carefully you can undoubtedly tell whether they undergo this change in such places or in the ground under tbe tree. If you are anxious for some of the chrysalides, gather some of tbe worms about the time they are full grown and commence to be uneasy—that is, crawl around a good deal—put them into a box and feed them, place a netting over the top, and you will he able to get the perfect insect in good shape. In sending specimens put them iu a tight box, preferably of metal, about the size of a pen-box, and wrap them up tightly without food. It will not hurt them any to be a few days without food. I should have answered this by mail, but you failed to give yonr state in writing.

Insects Injuring Strawberry-plants.—D. P. S., Fairmont, Minn. I wish you had sent me a sample of the insect tbat is causing so much injury to strawberry crops in your vicinity. It seems to me that it must be one of tbe leaf-rollers. These are especially troublesome when tbey come at the time the crop is ripening. The best remedy is to spray tbe foliage with Paris green and water about as generally used for the potato-bug. But it is probable tbat the berries are ripening with you, and you would hardly want to do this at this time, and in that case it is doubtful if there is any known remedy that will be satisfactory. Pyrethrum insect-powder would work very well and would be the best thing to use were it not for the expeuse, which I fear would be too much to make it profitable unless the herries are selling at a high price. The way to use it is to mix it with flour and let it stay mixed twenty-four bours in a tight vessel, so that the flour will take up the qualities of the pyrethrum, and tben dust it with a bellows onto the foliage in the evening. It is quite an easy matter to keep the insect off of the new heds by picking off the rolled-up leaves or by using Paris green and water botb. But for tbe old beds the best remedy is mowing and burning immediately after the picking of the crop; and tbis is important whether the hed is to fruit again or is to be plowed under, as by burning many insects are destroyed. The burning also destroys many spores of disease. I regret very much that I cannot suggest a perfectly satisfactory remedy.

THE POULTRY-YARD

Conducted by P. H. JACOBS

HAMMONTON, NEW JERSEY

PURE BREEDS AND MANAGEMENT

FARMERS who look for something more than the ordinary in pure breeds are disposed to manage on the theory of "the more feed the more eggs," and the result is that they feed excessively, make their fowls too fat, and do not get as many eggs from the pure-bred fowls as they formerly did from scrubs. Such instances are so common that they are well known, as many farmers who have flocks of pure-bred birds complain that their neighbors, who keep only scrubs, get more eggs than they. The fault is that while the neighbors do not feed so much food and compel their scrubs to work and scratch, the farmer who has good birds feeds them until he makes them very fat and renders them liable to disease. What every farmer should do is to never feed his fowls when they show no inclination to attempt to secure a portion of their food by working (scratching), as he will save food by so doing and have his fowls in better condition than when he surfeits them. It is almost impossible to convince farmers that the surest way to stop egg production in the summer is to feed the flock exclusively on corn, for it may be noticed on every farm that when night comes corn will be given liberally, and that, too, to hens that have just come in from the range with their crops full. Corn is very heating, and large, fat hens will frequently die during warm days from excessive heat. More eggs will sometimes be secured by giving no food at all in summer than when the fowls are very highly fed. When improving the flock aim to feed according to the breed. It is a waste of time and food to feed such active birds as Leghorns very liberally, as they can pick up twice as much as they can eat during the day. Large fowls may receive lean meat, the Brahmas, especially, but nothing else. Let the scrubs be improved by using pure-bred males, and if they have been good layers treat the improved birds in the same manner. If a flock of scrubs and one of pure-breds are fed alike it will be noticed that the pure-bred hens will lay more eggs than the others, and produce fifty per cent more in the form of meat.

THE DIFFICULTIES WITH CHICKS

Inexperienced poultry-keepers are liable to make a mistake in raising poultry by neglecting those a month old and upward for the younger broods. The reason of this is not difficult to realize, for it is thought that the birds, having gotten so far in safety, are able to look after themselves and do not require the same amount of attention as the younger ones, whereas the birds at the age mentioned need more care than they ever did before or will again. Neglect at such a period brings serious results, more birds being lost then than at any other stage of their growth. The cause is that the down, or nest-feathers, which have enveloped the body are being shed and the full-grown feathers are taking their place, thus causing a constant drain on the system. It is, in fact, a first molt, and there is not the same strength to meet it as is found in adult birds. Additional nourishment and careful feeding are almost important to the well-being of the chick, and undue exposure to cold or wet will be dangerous. Of course, some breeds are hardier than others, and get through the stage more easily, but the strongest need care. In fine, open weather the feeding will be the great point requiring attention, but in bad weather it would be a good plan to put the coop in the chicken-house. Young chicks will sometimes thrive well until they are about ten days or two weeks old, and then cease growing, become weak in the legs and gradually droop, finally dying. This may be due to several causes. One is the great drain upon the system when the chicks are feathering. This is the most noticeable among Leghorns and other fast-growing breeds, as compared with Brahmas, which feather slowly. This rapid production of feathers demands feeding four or five times a day, and on such foods as are rich in nitrogen and mineral matter, such as milk, meat and bones. The chicks that feather slowly seldom droop from this cause. Another cause of loss is the large head-lice, and still another is lack of warmth during cold, damp weather, the chicks being too large to find shelter under the hen. When chicks have good appetites, have no bowel trouble and strive to get their food eagerly, moving on their knees, it indicates rapid growth. Such chicks apparently have long legs, the cockerels being most affected, and they will soon stand up all right and make the best chicks in the lot, but at times the pullets are affected, also. When chicks stagger, their vents being clogged, the feathers rough and the chicks do not grow, but gradually weaken and die, and the weather is cold, it is from lack of heat at night in the brooder. When they appear to have rheumatism, eat, but are not lively and stagger at times, being well, it is due to sulphur or heavy feeding. Such chicks show the effects of rheumatism in damp weather principally.

INDICATIONS OF THRIFT

When starting with a flock, and in purchasing hens for laying, particular attention should be given to the color and appearance of their combs, which should be bright and red. Where the comb has a dull and sickly color and a kind of flatteued appearance, no amount of feeding and care will force the laying of eggs as long as these conditions exist. Again, the legs should be smooth and clean and free from scales or the appearance of spurs, both of which indicate that the hen has passed the laying age. The cock should be bought out of a different flock and be as purely bred as possible. The principal causes of failure in egg production are believed to be the keeping of hens that are too old; breeding in and in, or a failure to introduce new blood from sources entirely outside of one's own flock, and keeping the flock too long in the same runs.

THE MARKET NOT SUPPLIED

Those who begin with a few hens and gradually increase are the most successful. If there is any business above others that requires personal attention and experience to attain success it is that of poultry-keeping. The best breeds of poultry for farmers to keep depends upon circumstances. By all means keep the breed that pleases best; then you will be likely to give them the best of care. All breeds will lay well if properly housed and fed. There is not so much difference in the breeds kept as there is in the care given them, and one would suppose that a country blest with unlimited territory and an abundance of cereals would be able to produce its own supply of poultry and eggs; but such is not the case, as there are hundreds of thousands of dollars' worth imported into the United States annually. With careful and intelligent management there are none of our smaller industries more profitable than raising poultry and eggs for the markets of our cities.

SCURFY LEGS

Scurfy (or scabby) legs are among the most disgusting sights that can be witnessed in the poultry-yard. They not only disfigure the fowl and denote filth, but are a source of annoyance and discomfort to the birds. They arise from the rapid multiplication of a minute parasite, are "catching," and there is no excuse for them. There are a great many remedies advertised that are said to be sure cures for it, but a very simple remedy is to take a quarter of a pound of lard and gently melt it until it barely liquefies; then add a tablespoonful of coal-oil. Mix well, and give each fowl a good rubbing on the legs, putting it on thickly. Repeat this once a week for a month and it will effect a cure. If preferred, either sulphur or carbolic acid (a teaspoonful) may be substituted for the kerosene. When the fowls are rid of the difficulty occasional application will be necessary. It can be brought into yards by fowls from other places, and for that reason breeders should be careful and look out for it when procuring fowls from other yards. No good breeder who prides himself on his stock will allow such a disgusting sight as scabby-leg fowls in his yard.

NOTES FROM CORRESPONDENCE

CHICKEN-LICE—SASSAFRAS-OIL A REMEDY.—For the first time in my life I have become a subscriber to a farm journal, and the first number I received mentions this poultry-yard pest—lice. Please let me give your readers a hint of my experience with them. For nearly forty years my wife and I have kept from ten to twenty laying hens, and tried to raise from 50 to 200 young chickens each year. Nearly twenty years ago I read the statement in a paper "that if people would supply their chicken-roosts with sassafras poles they would have no trouble with chicken-lice." This was a good hint, and as my own stable chicken-house and coops were literally alive with the pests I thought quick and fast, and in a few moments evolved the deduction that if sassafras poles are a preventive of chicken-lice why will not sassafras-oil kill them? I sent at once and got an ounce of the oil, and in the evening, after the chickens had gone to roost, I put one fourth of an ounce of the oil into a three-gallon pail of water. With a whisp of twisted hay I thoroughly sprinkled it in the stable chicken-house and coops, and on the horses, mangers, chickens and nests, and to my great delight I could not find a live chicken-louse crawling about the premises the next morning excepting under the feathers of the larger chickens. The one application had evidently exterminated hundreds of millions of the little pests. I repeated the ablution a few times at intervals of two to four days, and was bothered no more with the little pests that season. Oil of sassafras applied similarly to the above has been my remedy for chicken-lice ever since. I find by experience that fifteen to twenty drops of the oil in a gallon of water is quite strong enough, and a gallon judiciously sprinkled is sufficient at one time for a small chicken-yard, one ounce of the oil being sufficient for a whole season's use. I often spray the sitting-hens' nests lightly with a small atomizer containing a solution of five to ten drops of the oil to an ounce of water, and I have had no bad results in the hatching of the eggs, and yet I am cautious not to wet the eggs on both sides at a time with the solution. The oil of sassafras is a volatile oil and soon evaporates from the eggs and nest, and yet I think best not to use it too freely on eggs for hatching. The bottle containing it should be kept well corked so that it may not evaporate and lose its odor, for my idea is that the odor is as effective as the actual contact on the lice. I cannot say that the use of oil of sassafras, as before described, once a week or month will prevent the gapes in young chicks, but the truth is that I have not had a case of gapes since I have been using the sassafras-oil on the chickens for lice. A. P.

New Weston, Ohio.

INQUIRIES ANSWERED

Young Turkeys.—J. R. D., Altoona, Kan., writes: "What is the cause of young turkeys being lame? The joints swell and the toes crack."

REPLY:—The cause may be due to some local condition, but probably to daily jumping to the ground from a high roost.

Egg-eating.—M. S. S., Chestertown, Md., writes: "What should I do to prevent my hens from eating their eggs?"

REPLY:—It is an acquired vice and difficult to cure, but good results have been obtained from the use of a box raised ten inches from the floor, open at one end, so that a hen must walk in rather than to jump down on the nest. The box must be only large enough for the hens to use.

Lameness.—M. M. M., Mina, Kan., writes: "My hens get lame, have bowel disease; turkeys also being affected. I applied kerosene to the legs. I feed Kafir-corn, soft food once a week, pepper, may-apple root, etc."

REPLY:—The fowls may be heavy and the roosts very high. Avoid feeding grain during warm weather if the hens are on a range, and remove the males. Kerosene should not be used on birds, as it is too irritating.

Chickens Dying.—D. C., Elk Grove, Wis., writes: "My fowls are affected with a sort of diarrhea, sit around, eat but little, get weak, stagger and die. They walk with difficulty. They have the run of the farm and are not fed at present."

REPLY:—Probably they are very fat, the warm weather affecting them. Confine them, give no food for forty-eight hours, and add a teaspoonful of tincture of nux vomica to each gallon of drinking-water for a few days. Feed only cooked lean meat until improvement is shown. Also examine carefully for mites and large lice. Remove the males from the flock.

Overfeeding.—K. M. F., Corums, Tenn., writes: "My birds have been dying for some time. They have no use of themselves. With the least touch the feathers will fall out. The skin seems to be thick and very red, and the birds are very thirsty. Fed through the winter on corn and corn-meal and they are very fat. What breed of chickens is the healthiest?"

REPLY:—It is a case of overfeeding on grain. Turn them on the range, giving no food at all. There is no "healthiest" breed, as everything depends on the management. All breeds will give good results if the conditions are favorable and close attention given.

CHINESE AGRICULTURE

[CONTINUED FROM FIRST PAGE]

These practical farmers are destined to overrun the whole of the East Indian archipelago, and naturally they will go first where the government gives them the best chance. Already they are in the Philippines in large numbers, and they will go over by the thousands now. They will be welcomed as the colony's best citizens, as they already are in the British colonies of Malaysia. In the Philippines within the first half of the twentieth century will be seen the possible developments of Chinese agriculture.

PLANTING RICE

THE STRAWBERRY SEASON OF 1899

[CONTINUED FROM FOURTH PAGE]

The fruit is of good form and color and worthy the attention of growers for market. It is probable that under high culture the fruit would be larger, and in that case the variety would be more valuable.

Perfection is of medium size, good quality and firm. It is fairly productive, but the plant has not proved vigorous in my soil, although this is contrary to the reports of the variety in sections where heavier soil is the rule. As fruited on my grounds it has nothing to recommend it over fifty odd varieties of fair value.

Jerry Rusk, which is illustrated, I consider one of the most promising of the newer sorts after fruiting it for two years. The plant makes a good, vigorous growth, is free from rust, and is generally all that could be desired, while the berries are very large, of beautiful shape, as the illustration will show, and leave nothing to be desired in the way of quality. In season it is early to medium, and is firm enough to ship long distances. This is another of the few varieties of the newer sorts that I will plant largely of without further tests, for it seems to meet the requirements of both my home and near-by markets. It is one of the varieties used in making up my shipments of fancy fruits referred to in the first part of this article, and its fine flavor and brilliant color made it one of the features of the shipment.

G. R. K.

NOTES FROM CORRESPONDENCE

FROM OKLAHOMA.—I think this is the best place in the United States for a poor person to get a start. I would prefer the poorest eighty acres here to land where one must eat up in the winter all that he raises in the summer. Our summers are long. We have very little mud. This is the finest place for poultry I ever saw. My peach-trees of three years from seed are bearing. We just turn over sod and raise thousands of melons. Grape-vines bear abundantly when two years old. We raise all kinds of grains and vegetables. Our market is not good at times, as we are twenty-seven miles from a railroad, but that will be remedied before long. Have had fine rains, and our crop prospects are good.

M. A. L.

Floyd, Oklahoma.

FROM ARKANSAS.—The business little city of Mammoth Spring takes its name from one of the largest springs in the United States. It boils up out of the ground at the foot of a big hill and makes quite a large but not a navigable river. It furnishes fine water-power; within half a mile of the head of the river there is a large cotton-gin factory, flouring-mills, electric-light plant, etc. This part of the country is generally hilly; however, we have plenty of good, rich farming-land and generally make good crops of cotton and all kinds of grain. This is also a good fruit country and fine stock range. We have from four to ten months school. Teachers, generally from the North, get from $30 to $40 a month. Land is cheap. One can get a good farm out four or five miles from town for from $5 to $15 an acre. There is some land that is too rough for farming that would grow good fruit that could be bought for $2 or $3 an acre. We have good, cold spring-water. Have good market for nearly everything. I am a farmer living three miles from town. My wife sells all the butter that we have to spare at twenty cents a pound the year round.

J. H. P.

Mammoth Spring, Ark.

FROM INDIAN TERRITORY.—The beautiful Indian Territory within a very few years will undoubtedly rank with any of the border states in agricultural products adapted to this portion of the country. The territory is settled only in portions; in other sections there are yet many thousands of acres of very fine land lying idle for want of willing hands to bring it into a state of cultivation. Thousands of cattle are yearly fed and prepared for the Northern and Eastern markets. Large coal-mines are profitably operated in the territory. Flour-mills, cotton-compressors, cotton-seed oil-mills and a few small factories have already been established, and seem to be profitable investments for their owners. None but members of the different tribes of Indians are allowed to own land in Indian Territory, although there are many thousand non-citizen farmers who rent and lease land here. . . . By combining Oklahoma and Indian Territories an additional star could be added to "Old Glory," and a new state which would favorably compare with her neighboring sisters added to the great Union. May the day soon arrive. So the two make one great state it makes little difference whether we call it Indiahoma, Indianola or Oklahoma.

Coalgate, Indian Ter. E. C.

FROM VIRGINIA—THE FARM-HAND.—I have been an interested reader of the FARM AND FIRESIDE for some time, and like each paper better than the preceding one. One of the best articles I have read for some time is Fred Grundy's answer to B. M., Michigan, on "Farm Pay," in the May 15th issue. I, too, have worked a number of years on a farm at starvation wages, never receiving more than $11 a month (and I am considered an average farm-hand in speed and proficiency), getting up between half-past three and half-past four A. M., stopping at noon just long enough for myself and horses to eat dinner, returning at once to work, and only ceasing when I could no longer see. Hundreds of our young men have migrated to the different western states in search of lighter work, better wages and fewer hours. That they have found all of these is attested by word of month and the fact that many of them have settled permanently throughout the West. Not a few of them are well-to-do farmers in their adopted state. What of those that remained at home, the ones that "did not care to wander from their own fireside?" Sad to relate, they are to-day where they were when they began working for themselves! Not more than one out of fifty has laid by a nest-egg. One sees them everywhere, stoop-shouldered, shambling, prematurely aged men. They see no pleasure. Work! work! work! day in and day out. Is it to be wondered that the cities are overcrowded with country boys? Anything, they think, but a life of eternal drudgery. And I for one most heartily agree with them. These daylight-till-dark farmers make nothing by their style of farming. Did they but stop awhile and think, study and adopt nineteenth-century methods of farming, treat their help as men, they would soon learn that more and better work could be gotten from the same hand. A farm-hand is like anything else when worn out, "dog-tired," and half paid. He cannot and will not do the amount of work and do it as well as he would were he fresh and receiving a price consistent with the work done. Then in such times as harvest, hay-making, etc., no hand would object to working early and late to save the crop.

F. A. B.

Cowan's Depot, Va.

QUERIES
READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Ants Killing Rhubarb-plants.—Mrs. T. P. T., Timon, La. Boiling water or soap-suds poured in sufficient quantities into an ant-hill will destroy a greater part of the colony. It is only a partial remedy, however, and perhaps dangerous to the plant close by. The one sure way of getting rid of the ants is as follows: Get some bisulphid of carbon (a bad-smelling, inflammable substance). Make a hole with a stick into the center of the ant-hill, pour a tablespoonful or more of the drug into the hole, and fill it up with soil as quickly as possible, as the carbon is very volatile and would quickly evaporate. The deadly fumes will diffuse all through the ant colony and kill nearly all of them.

London Purple.—I. S. D., Aurora, Illinois, writes: "Please explain why you did not mention London purple in your article on insecticides, etc., on page 3 of the June 15th issue. I have used it about twenty years; find it costs less than one third as much as Paris green, is easier to keep in suspension, and a small quantity is more easily detected on the foliage."

REPLY BY T. GREINER:—My advice in such a case would be to trust the bridge that has carried you safely over for twenty years. Why change when an article is found to be perfectly satisfactory? Our friend, however, must be especially fortunate in getting a supply that is uniform in quality. It is nearly twenty years now that I have not used London purple. When I did use it that long ago I found that the chemical gave good results one year and poor ones another. Some samples used to scorch the foliage badly, even if applied in weak doses. In short, the fault I found with it was its varying strength and composition. Possibly if applied with lime as we apply Paris green it might do just as good service. I am using arsenite of lime with favorable results, and am trying paragrene, which is also promising.

Canning Corn, Green Peas, Etc.—In reply to J. C. H., Franklin, Tenn., and others, we republish the following from a contributor:

"Pick the corn when right for table use, cut from the cob and fill glass cans, jamming it down until the milk comes out and you cannot get more corn in the can. Put on the rubber and screw on the cover as tightly as possible. Place in a boiler of cold water, with a board under and a weight over to keep them in place, and boil three hours. Set off the stove, and let the cans cool, being careful not to leave them in a draft, or the cans may crack. As soon as you can, tighten the covers. Set the cans in a dark, cool place. Shell peas, fill the can, and then fill with cold water until the peas are covered. Put on rubbers and covers and cook two hours in a boiler, the same way as the corn. Cut or break string-beans as you do for the table, fill the cans, cover with water, and cook two hours, the same as peas. Tomatoes can be canned whole or cooked. To can whole, peel and put into the can whole or cut in two crosswise, fill with water, and cook one hour, the same as peas and beans. Or peel and cook the tomatoes same as for the table, fill the cans while hot, and put on the rubbers and covers. I have tried both ways, and they have kept without any trouble. I have used all these receipts, and know the vegetables will keep."

Preserving and Pickling Cucumbers.—J. T. C., Bay City, Mich., and others. We republish the following from Mr. Greiner's "Garden Notes," in a former number of this paper:

"PRESERVING.—The cucumbers are picked every other day in the morning as soon as the dew is off, and sorted into three sizes from two to seven inches in length, each size packed by itself. If possible, the packing is done in the afternoon of the day they are picked. Barrels may be used; when full, the cucumbers are covered with brine of sufficient strength to float a potato. No more salt is to be added. After standing three or four days to settle, the scum should be removed, and each barrel refilled from other barrels containing cucumbers of the same size which had been in brine of like strength. The barrels when headed up and marked are ready for shipment. A forty-gallon barrel will hold from five to six thousand of the smallest size, and from ten to fifteen hundred of the largest. The cucumbers must be cut from the vines with a sharp knife, or better, scissors, leaving on each a bit of stem. Cucumbers put up in this brine will not shrivel, and need but little freshing, but housewives must bear in mind that they will not keep through the second summer without adding more salt.

"PICKLING.—Drain them from the brine, fill any receptacle two thirds full, pour boiling water over, and let remain twenty-four hours. If too salty (which will depend upon the size), pour off the water, stir thoroughly from the bottom, that they may freshen evenly, and again cover with boiling water. After twelve hours drain, and cover with boiling weak vinegar; three days later drain, and cover with cold vinegar of full strength, sweetened and spiced or not, to suit the taste. I will say, however, that I do not know of any grower around here who ever sold his pickles in any other shape except just put up in brine. I am not aware that there is a wholesale market for ready-made pickles; that is, for pickles in vinegar. And even if there were the average grower, lacking the skill and experience necessary for putting up pickles in vinegar or in any fancy style, would do far better to sell his pickles in the brine."

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Worms in Horses.—H. J. H., Pike, Va. You will find your question fully answered in FARM AND FIRESIDE of June 15th, under the head of "So-called Pinworms."

Turpentine.—J. L. W., Durham, Iowa. I must regard your question as an idle one, because I cannot see any reason whatever why you should want to feed turpentine to sows a week or ten days after they have been bred, for there can be no doubt the feeding of it would be injurious.

Possibly Swine-plague.—F. B., Collinsville, Ohio. The symptoms you describe are occasionally, and in combination with others quite often, observed in swine-plague, or so-called hog-cholera. It is therefore not impossible that you may have to deal with that disease. You will probably have found out whether the disease is swine-plague or not before this reaches you.

Removing a Brand—Small Sores.—A. G. S., Walden, Ill. A "brand" on a horse cannot be removed without leaving a scar, because lost or destroyed skin tissue (the branding already caused a destruction of skin tissue) can never be reproduced, and only be replaced by scar tissue. ——Your description of the small sores of your horse leaves me somewhat in doubt as to their nature, and therefore I think it will be best to have your horse examined by a veterinarian.

Black Teeth in Pigs.—W. J. K., Brisbane, Mich. Black teeth in young pigs are not a rare occurrence, particularly where the diet of the sow is defective and the food lacking sufficient quantities of lime-salts, phosphates and nitrogenous substances, or where these substances, though contained in the food, do not benefit the animal organism on account of too much acid being introduced with some sloppy food. Breeders usually pull out such black teeth whenever they find them, but this will not do any good unless at the same time the diet is made more suitable.

Goiter—Probably a Symptom of Heaves.—A. T., Pratt, Wis. The swellings, or lumps, as you call them, on each side of the larynx of your mare are probably the enlarged thyroid glands; or, in other words, a case of goiter, and comparatively harmless, while the surgical operation required to remove them is rather dangerous. It is not at all probable that the enlarged thyroid glands have anything to do with the coughing of the horse and the slight discharge of the same from the nose, which very likely are symptoms of incipient heaves. About the latter please consult the numerous answers recently given in these columns under the heading of heaves.

Pressure Upon the Brain.—S. E. A., Harriman, Tenn. The nervous and paralytic symptoms of your cow as described by you are such as will be produced by a one-sided pressure upon the brain; but whether the latter is produced by hemorrhage caused, perhaps, by the rupture of a small blood-vessel, or by other causes, cannot be made out from your description, painstaking though it is. Applications of cold water or of crushed ice upon the poll would have been indicated when the first symptoms made their appearance, but I cannot advise you what to do now, even if the cow is yet alive when this reaches you, because I have no means of knowing what changes will have been produced since you wrote.

So-called Blackleg.—J. E. M., Princeville, Ill. What you describe looks decidedly like a case of so-called blackleg, and your case again confirms the rather frequent occurrence of that disease in calves much less than six months old (your calf, you say, was a little over two months old), corroborates my experience and often repeated observation, and refutes the statement made by Friedberger and Froehner on page 485 of the second volume of their "Pathologie und Therapie," third edition, in which they say that calves less than six months, and native(?) cattle more than four years old are never attacked by the disease. They, however, admit that this erroneous statement has been copied from Arloing. For further information in regard to the prevention of so-called blackleg (a successful treatment may be looked upon as out of the question) please consult FARM AND FIRESIDE of April 15th.

"Grubs" in the Head of Sheep—A Hard-milking Heifer.—H. W., Eau Galle, Wis. "Grubs" in the head—that is, the nasal cavities, maxillary and frontal sinuses and ethmoid bones—of sheep are the larvæ of a fly known as Œstrus ovis. The prevention consists in keeping the sheep during the summer months away from such places at which the flies are swarming, but especially from timber pastures and pastures surrounded by hedges, scrubs or trees, because these are the favorite swarming-places. Where this cannot be done, experienced shepherds endeavor to prevent the flies from depositing their eggs on the borders of the nostrils of the sheep by putting tar on them (the borders).——The milking of a hard-milking heifer can gradually be made easier by very vigorous milking. Any attempt to enlarge the openings in the teats of such an animal by means of cutting or of any other instruments will not only result in failure, but may also become very disastrous to the teat.

Periodical Ophthalmia.—C. M. F., Essex, Mo. What you describe is evidently a plain case of periodical ophthalmia, a disease which almost invariably terminates with the destruction of the eyesight, and in which every attack leaves some slight and almost imperceptible or more severe morbid changes in the affected eye until the eyesight is lost. Consult answers under above heading in recent numbers of this paper.

Charlier's Method of Spaying Cows.—J. V. S., Catlin, Wash. In Charlier's method of spaying cows the whole operation is performed on the standing animal through the vagina, and the abdominal cavity is not opened at all through the external teguments. It is well known to every well-informed veterinarian, requires special instruments for its performance, and is described in every modern work on surgical operations. Although the operation is not at all difficult, I will not advise any one to undertake it, even with a book of instructions at his elbow, unless he is thoroughly familiar with the topographic anatomy of the parts in question, is a skilful operator, and has small hands and nimble fingers.

Warts on a Horse.—L. S. B., Arkadelphia, Ark. Warts such as you describe usually disappear in time without any treatment, especially if on a young animal, provided they are neither wounded nor irritated. If, however, one desires to get rid of them before they are ready to go, such flat warts are easily removed by a few applications of pure nitric acid. These applications are best made in the following way: First fasten a small piece of surgeon's sponge to the end of a stick of convenient length, then pour some pure nitric acid into a salt-mouthed vial, dip the sponge into the acid, and then, as soon as no more will drop off, touch the wart, but nothing else, with the sponge. Repeat this every minute or two on every wart until each of them has been burnt down to a little less than half its former thickness. If in a few days it should appear that one or another of the warts does not continue to shrink and to disappear, it may have to be touched again a few times with the nitric acid in the same way as before; but as a rule this will not be necessary.

Puerperal Paralysis.—E. P. L., Armstrong, Ind. What you describe is not at all a new disease, but an infectious disease of quite frequent occurrence in every clime wherever good milk-cows are kept. As a rule it only attacks good milkers when in a good or very good condition as to flesh, within a few days after parturition. Being infectious, the disease naturally is of more frequent occurrence in some districts than in others, and is apt to increase in frequency wherever it once has gained a good foothold, and where at the same time large numbers of good dairy-cows are kept. As a rule the disease will be prevented, first, if the premises—stable, for instance, in which a case of puerperal paralysis has occurred—are thoroughly cleaned and disinfected; secondly, if cows known to be good milkers and in good flesh are kept on a light diet the last six weeks before calving and the first week or two after calving; thirdly, if the cows are kept in perfectly clean quarters during the time from a week before to a week after calving; and fourthly, if the udder of the fresh-milking cow is thoroughly milked out as soon as the new-born calf has consumed (sucked out) the first milk (colostrum). If these precautions have been taken, and yet danger is apprehended, I deem it advisable to inject into the uterus, as soon as the cow has cleaned, a quart of a milk-warm solution of corrosive sublimate in water of the strength of one part of the former to fifteen hundred parts of the latter. If, notwithstanding, the first symptoms of the disease should make their appearance (which, however, will be a very rare occurrence), I advise to call at once on a competent veterinarian.

Chronic Metritis.—M. A. S., Akeley, Minn. What you describe appears to be a case of chronic metritis, or inflammation of the uterus. Your mare should not have been put to hard work after she had her colt, especially as she was not well and showed symptoms of disease. As it is now I am afraid that any treatment will be too late. If you wish to make an attempt, put her in good, clean and well-ventilated quarters, exempt her from all kinds of work, keep her on food that is nutritious and easy of digestion, and irrigate her vagina and uterus, first with a gallon or more of warm water of a temperature of ninety-eight to one hundred degrees of Fahrenheit for the purpose of washing away and removing all the pus, exudates, etc., and then twice a day with a mild antiseptic, say with a one to two per cent solution of creolin in warm water of the same temperature as given above. The irrigations are best made in the following way: Take a common wooden bucket, such a one as can be bought in a store for twenty cents; then bore a smooth hole in the bottom just large enough to allow the air-tight insertion of an end of glass tube four to five inches long and a lumen (clear opening) of one quarter of an inch in diameter. Instead of a wooden bucket you may use a tin bucket into the bottom of which is soldered in a tapering tin tube, also four or five inches long, and with a clear opening at the lower end of one quarter of an inch, and at the upper end flush with the upper surface of the bottom of the bucket, of about one half inch; then take a rubber tube five to six feet long and a clear opening of about five sixteenths of an inch, introduce one end of the rubber tube in a gentle way into the vagina, and, if possible, also through the os into the uterus, and shove the other end over the glass tube or tin tube, as the case may be, far enough to make a tight joint. This done, elevate the bucket as high as convenient above the mare, and then pour in the fluid which you have ready, and it will descend into the uterus by its own weight.

THE FINDING OF THE RHIZOBIUS KENTII

By John E. Bennett

WHEN Nature created Tracy Kent she was seemingly in one of her abstract and passive moods; not a mood full of motion and forceful strength, but the reverse, for she produced a creature who, in his fifteenth year, had developed into an undersized boy with a spindle body and a big round head which set, bulging and like a knob, over an area of thin-skinned face, and whose manner was as taciturn and quiescent as her own most reposeful calm.

There was nothing remarkable about this face of Tracy's other, perhaps, than its absence of expression and lack of animation; for it was peppered with brown freckles, which clustered where the skin pinched into a little ridge of nose so small that it seemed ever in danger of some subcutaneous dissolution that would leave nothing intervening between his broad incision of a mouth and the two blue eyes through which his meditative soul looked dreamily out under that projecting roof-like brow.

Tracy's father was a mechanic, and had been for years a pattern-maker at an iron-foundry in the neighborhood of which the family lived. He was a small, quiet man, ingenious, for his work required thought, but careless of his family and his domestic affairs, who, when his boy was an infant, had given so little consideration to his appearance and presence that when his wife sought conference with him in the matter of bestowing upon the child a name, had indifferently proposed "trace" as the cognomen, that word being suggested to him by a pencil tracing of a pasteboard pattern which he was at that moment making. Mrs. Kent modified the word to "Tracy," and it was in this manner that the lad acquired his name.

Very different, however, in appearance and disposition was Mrs. Kent. She was a large, stout woman, quick of speech and temper, as alert of the nimble penny as her spouse was unappreciative of the felicities of its possession, and who had permitted this quality to enlarge into the petty vices of stinginess and avariciousness.

Poor Tracy! He had a hard time for a lad without a disposition to shift in defenses against his father's neglect and his mother's misusage, which, as he grew older, developed into a habit of almost persecution. There was some plea, however, for Mrs. Kent's treatment of her son, for she verily believed the boy to be absolutely worthless. Stupid she knew he was; and lazy—she had been too long familiar with his indisposition to activity in the business of house chores to allow that tendency of his to go by any other name. Besides all this, he was a trifler, and interested himself in nothing so much as to play with bugs and beetles, stick them on pins, cork them in bottles and assort them in old envelopes, until his collection would accumulate to draw the attention of his mother. At sight of this aggregation of "nasty things" the good dame would utter some epithet of horror and disgust and give the gathering a mighty flirt with her broom which would send the entire cabinet into irretrievable dispersion and loss, to the incomparable though smothered anguish of the boy.

But Tracy was not permitted to indulge his fondness for entomology to the absorption of the greater part of his energies, for these were employed in serving a dry-goods establishment in the heart of the city, where he earned three dollars a week as a bundle-carrier. He had been at this later business in all about five years—ever since his tenth year—bringing home to his mother every Saturday night first a dollar, then fifty cents additional on the Saturday nights of each succeeding year, until his advance in wages had reached the magnitude of total as above stated. Tracy's father occasionally grumbled that "That boy ought to be kept in school instead of packin' bundles about the streets," but Mrs. Kent would reply that the "best schoolin' he could git is the school of experience, where he'd learn himself how t' make a livin';" that she "didn't believe in stuffin' boys up with eddycation, 'specially them boys as shows no more application fer it than Trace."

The truth, however, was that Mrs. Kent had more regard for the trifle of earnings which the boy regularly each week placed into her lap than she held for any particular views concerning the most advisable methods of his education; for the lady contentedly looked forward to the time when, in due course of promotion, Tracy would become a clerk in the great store of Muirein & Co., with wages, and her own consequent income increased to the considerable portion of nine dollars a week.

What Tracy thought about his future no one knew; indeed, no one cared. He moved about his affairs in a quiet, regular, unobtrusive, uncommunicative way, and was regarded by the floor-walker at the store, under whose jurisdiction in working hours he existed, as a steady, reticent, though not a dull boy, who was fairly reliable, but whose habit was too abstracted to ever progress far in the line of business.

The view entertained by the floor-walker might have been seconded by almost any one who had observed Tracy about eight o'clock one April morning with a big bundle under his arm, moping along a quiet by-street through the business center of San Francisco, in the direction of the wharves and shipping, engrossed in reading a pamphlet of some sort as he almost staggered on. It was an entomological report of the State Board of Horticulture which had just reached him at the store, through the mails, from the office of the board, at which place his name was known as the forwarder of numerous specimens invariably accompanied by inquiry as to what they were, "with as full particklers about them as you can give."

These specimens were usually very ordinary and familiar individuals of their respective families, which conveyed to the state entomologist the idea that the sender of them was a person poorly versed in the science; but the inquiries were always politely and fully answered, much to the joy of the poor boy, who had come to regard the state institution, and particularly the entomologist, as a sort of friend and near relative.

As Tracy stumbled along with his book and bundle, the street on which he traveled opened upon a wide cross-street, at the far side of which were the broad wharves running down between the big sail-ships, their bows and long jib-booms thrust high in the air far over the bounding sidewalk. One ship, the largest of all, lay broadside to the quay, and as Tracy approached this from abaft he read the white letters across her stern, "Imperator, New South Wales."

"This is the ship," thought the boy, and thrusting the pamphlet in his pocket he seized the rope of the gang-plank and made his way aboard. Finding no one on deck he ventured back in the cabin, where he met a cheery-faced stout man, who signed the boy's receipt as captain, and who, as he took the bundle, remarked, "Yes, those are my wife's dress patterns," and tossed the lad a silver quarter as he was about to bow his adieus.

Passing from the cabin to the main deck on his route of exit, Tracy found himself among a number of tall potted plants which were setting upon the deck in the strong sunshine of the early spring day. The boy's bug instinct prompted him to pause and examine the plants for any of those objects of his odd propensity, and strong was the thrill which permeated him when he found the stalks and leaves of most of the bushes to have adhering to them little dots of red pods, like ruby settings, which, when he removed them from their positions and pressed them in his fingers, yielded a tiny moisture of slime. Some of the things, too, appeared to be hatching out, as a minute light-yellow aphis was seen under some of the little nipples, and they were observed to be moving about. Another most interesting thing connected with this display was the presence of a tiny jet-black bug which gnawed holes in the horny crust of the mother-dot through which it inserted its devouring proboscis, and which very voraciously ate those tender aphides caught crawling upon the back of the plant; when this little ebony hemispherical body was disturbed, it would spread its shell-like wings and fly away.

Absorbed in these interesting phenomena, Tracy watched these strange things closely through his little pocket-lens, undisturbed by any comer. An hour passed, two hours, three hours, he was still watching: a part of the time lying upon his stomach on the deck, a colony of both kinds of bugs in front of him, again poring over the plants watching the life in its native habitat.

At twelve o'clock the ship's steward passed from the galley aft to the cabin, and accosted the boy.

"Where did these plants come from?" asked Tracy.

"From Australia," replied the steward, with a grin.

"Are you going to land them here?" asked the boy.

"No," was the reply; "they're flowers. They belong to the captain's wife. They've been in the cabin, and I've brought them out here to clean them off; they've got full of bugs."

"I see they have," remarked Tracy. "Would you let me have a few of them?"

"The plants?"

"No, the bugs."

The man looked astonished, and laughed.

"Course," he replied; "take all you want. But what'n th' blazes are you goin' to do with them?"

"Oh, I like to look at them," replied the boy.

"Course, take 'em all. I wish you would take 'em all; it'd save me th' job of cleaning them off."

"Can I have one or two of the leaves, too?" asked Tracy.

"Well, now, I don't think the madam'd like you to pull off th' leaves; there's so few good leaves on 'em what ain't splotched over with them things," returned the man.

"I don't want good leaves," said Tracy. "I want them what's splotched; splotched all over."

The man again looked surprised and pulled off several of the filthiest, which the boy received with much expressed pleasure, and gathering a quantity of the black beetles in a little pasteboard box, he thanked the steward and hastened away.

Straight to the post-office Tracy then went, and scrawling something with a lead-pencil on half a sheet of paper, he folded it, and mailed the letter and the specimens to the state entomologist, using a large share of his quarter to pay the postage.

Then Tracy turned his face toward the store.

It was one o'clock. For the first time he realized the hours which had lapsed since he set out upon his journey. Frightened and trembling he struck out on a run which he did not slacken until, breathless and exhausted, he entered the store.

"Did you deliver those goods?" asked the floor-walker, sternly, his sharp eye having discerned Tracy as he sought to skulk off among the boys in waiting.

"Yes, sir," was the reply.

"Let me see the receipt."

Tracy handed him the captain's signature.

"Now, you go to the office and get your time and get out of this store; and don't you come back here any more," said the floor-walker. "You've been gone on this trip since eight o'clock this morning."

Dazed as though struck a sudden stunning blow the boy, nearly blinded, did as he was directed; and in an hour after his mother, the money in her purse, was nervously and in great haste donning her "things," bound for the Muirein store. She was excited and cross, scolding and threatening the while, and she was going to learn what the trouble was that had caused Tracy to lose his position.

The report she received there did not enlarge her esteem for her son. When she returned she was boiling with rage. She threatened to "whip him" if she should ever catch him "lookin' at another one of those dirty bugs ag'in." She admonished him that in such event also she would "drive him out of the house," and he would have to "git his living where he could;" and so on at great length the exasperated lady emptied her wrath upon the responseless boy, who sat hands in pockets, his big head tilted toward the floor and his blue eyes dripping tears.

When this first explosion of the maternal fury had subsided Tracy was sent forthwith back to the city's center to look for employment. He was not destined to early success in this, however, for though he very diligently canvassed the business houses, he met everywhere the uniform response, "No, don't want no boy," and the disheartened and sorrowing lad would at night return to his home to be taunted by the abuse of his mother until his taciturn father would interpose in behalf of peace.

"I was looking for number nine hundred and sixty-three," remarked a gentleman upon the sidewalk, in black broadcloth suit and glossy plug hat, as he held his eye-glasses to his eyes and gazed on the numbers above the doors.

"This is nine sixty-three," returned Mrs. Kent, who was at that moment sweeping off the front steps.

"Nine sixty-three Bonsall street?" queried the gentleman, turning his glasses upon a paper which he held in his hand.

"This is the place, sir," replied the lady.

"Well, I was looking for Mr. Tracy Kent; is there a gentleman here by that name?"

"That's my son," replied the woman, astonished that any one so important in appearance as her questioner should be making inquiries for Tracy.

"Ah, well, then I'm all right," declared the stranger. "Is he in?"

"Yes, he's in," returned the lady, curiously, pausing with her broom in front of her, "but I'm his mother, and I'd like to know what you want with him."

"Well, now, perhaps I could explain better if I could get to see the young man," said the caller, whereupon Mrs. Kent invited him to a seat in the parlor while she went to call "Trace."

"Are you the young man who has been sending entomological specimens to the state bureau?" asked the visitor of the frightened and abashed youth who had become seated before him.

In much confusion Tracy nodded that he was.

"And did you send some specimens of scale and its parasite to the bureau about three weeks ago?"

Tracy again nodded and whispered, "Yes, sir."

"Well, I am Professor Ashley, of the university here, and Professor Crawley, of the State Board of Horticulture, has sent me a letter in which he states—well, I'll read it."

ENDFIELD, May 15, 1888.

PROFESSOR J. R. ASHLEY:—

My Dear Professor:—There is living in your town a person named Tracy Kent, whom I take to be a student of entomology, as I have received from him from time to time specimens accompanied by inquiries which would indicate him to be such. About three weeks ago he forwarded to this bureau a number of red scale of the orange (Aonidia aurantii), which are now so prevalent in the orchards of this state as to have caused the destruction of thousands of the trees and to threaten the existence of our orange-growing industry. Accompanying the scale sent by Mr. Kent were a number of black beetles which I take to belong to the Rhizobius family, and which unquestionably are the most destructive parasite on this scale ever yet discovered. We have tried it very thoroughly here and find there is nothing which can be compared to its ravages upon this scale, except those of the Vedalia cardinalis upon the Icerya purchasi. Mr. Kent sent us a sufficient number of the new beetle to stock the laboratory, and we placed a colony of them in a badly infected orchard two weeks ago and find to-day there is not a live scale upon those trees. The beetle possesses the great qualities of rapid propagation and broad dissemination, as they fly from tree to tree all over the orchard and deposit their eggs.

You will understand from what this little beetle has already accomplished that the state board esteem the discovery to be a highly valuable one and of immense importance to the horticultural interests of our state. The board has, therefore, at its last meeting, voted Mr. Kent the sum of five hundred dollars for his services, and on my own behalf I would like to inquire into the circumstances of Mr. Kent, and if he is not pursuing his entomological studies under as favorable conditions as he desires, and if he wishes to continue them, I think I can arrange it so his education may be continued without further expense to himself.

Yours very respectfully,
WETHERFORD CRAWLEY,
State Entomologist.

When Professor Ashley had completed his reading he handed the check which the letter contained over to Tracy, who received it, sitting dazed and speechless upon his chair.

Mrs. Kent was also speechless for a moment, but she soon recovered her voice and broke into a large number of questions, as a result of which Professor Ashley was forced to relate the whole matter again in detail.

When, however, the full purport of the entire matter grew upon the lady she became exceedingly loquacious. In her exquisite excitement there seemed to be no surcease to the rattle of her tongue. Suddenly recognizing astonishing merit in her son, her mind was drawn at once to a contemplation of the sources from which he had drawn his genius. She recollected that her cousin two removes on her mother's side had been a professor in a university; that her father's brother had written a book and edited a newspaper, and that some other kinsman, whose identity was blurred in her mind, had invented something and had it patented.

Throughout all this garrulity little Tracy sat silent, his hands in his pockets; but when Professor Ashley rose to leave, and told the lad to come to the university on the morrow and he would send him to the capital to Professor Crawley, the poor boy's eyes dropped tears which he wiped away with his hands.

Tracy gave his mother the $500 check, but she insisted he should retain $50 of the sum for his own spending-money. The good lady, too, expended much of the amount remaining to her in fitting out her son with new clothing, so that with trunk and valise and the consent of both parents, Tracy, on the following day, was given railroad tickets, and some hours after he was the guest of Professor Crawley, who became his friend and patron.

An oil-painting of Professor Kent now occupies a prominent position in the meeting-room of the State Board of Horticulture, while the professor himself is at work in Australian fields in search of beneficial insects destructive of the pests of horticulture. The red-scale parasite he so auspiciously discovered on board the "Imperator" received the name of Rhizobius Kentii, in honor of its finder, and that little beetle has long since rid the state of the red-scale pest. Professor Kent is recognized as a great genius in entomology, its most enthusiastic and original investigator, who has yet appeared in the West. He continues liberally to support his parents. His mother never tires talking among the neighbors of the greatness of her son, and how his unusual talents were early perceived by her, and what happy expectations she invariably held of him.

MUST HAVE THE COUNTERSIGN

While visiting one of the camps during his recent Southern tour, President McKinley chanced to be strolling about unattended, and sought to pass a certain line which was patrolled by a vigilant sentinel. The sentinel promptly stopped him and demanded the countersign.

"I don't know the countersign," said Mr. McKinley.

"Then you don't pass," said the soldier.

"But," said Mr. McKinley, "I am the President of the United States."

"I don't know about that," replied the imperturbable sentry, "but if you haven't got the countersign you couldn't get by here, even if you were Dewey himself."—Argonaut.

WHEN THE COWS COME HOME

"Clink, clink, clink-clink, a clinkety-clink"—
  Through the ragged brush of the pasture path,
And the "old boss" stops at the brook to drink,
  And tosses her head with a jest of wrath.
With hoofs sunk deep in the brook's black loam,
  And muzzle deep in the lazy stream,
She waits for the laggard herd to come,
  With ears that droop and eyes that dream.
Her sleek sides bulge with contentedness,
  And her udders drip with an overflow
That blotches with white the water-cress
  That sags in the current, to and fro.

The eddies whirl where her long tail flings
  Its tufted end with a listless toss,
And the gurgling water swings and sings
  Like whirling wings in the brookside moss.
As the water clears of its muddy rile
  And the "old boss" drinks, with nostrils flared,
The dusk, slow stealing, mile on mile,
  Grows dark where the deep woods stand ensnared,
  And out of the twilight's hazy height,
Where the dog-star loiters, white and dim,
  A drifting swallow pipes good-night.

Then, drowsily, with a soul-deep breath,
  The "old boss" raises her head and sighs,
And bright as a sword from its guarding sheath
  The sunset gleams in her glowing eyes.
It turns the bell at her throat to gold,
  And silvers the red of her silken coat,
And the telltale leaves of the year grown old
  Turn pale in the pools where they lie afloat.
Out of the silence, shrill and high,
  A voice of the farm-yard quavers through,
"Come, 'boss!' come, 'boss!' come, 'boss!'" its cry,
  And the "old boss" softly answers "Moo!"

Only the call of the cow—that's all;
  Only a wistful moo, and yet
It seems that I heard my childhood call—
  And the dusk is here and my eyes are wet.
—R. C. R., in Chicago Times-Herald.

SAM'S GRANDMOTHER

BY MATTIE DYER BRITTS

"MY DEAR fellow, I am really glad to see you!" It was a handsome young man who spoke the words to another, who had just leaped lightly from the train at a neat country village not a thousand miles from—well, no matter where. "It does me good to see you, dear old boy. I didn't half think you would come."

"You can't be more delighted to see me than I am to be here, Sam. Why didn't you think I would come? I wrote you I would."

"Oh, yes; but fancy what you had to—Where's your luggage, Jack?"

"Right here. A big telescope and my gun-case; you said you had some good shooting about these woods."

"Yes, we have that! Come, huddle the traps right into the buggy, and we'll be off. I dare say Mime has had supper waiting this half hour."

"Up you go, then." Jack Cameron tossed his things into the back of the low buggy, took a seat beside Sam, who already sat holding his lines, and they were off down the smooth road to Woodside, the pretty place two miles from town where Sam Dermott lived with his old-maid sister, since the death of their father left them the owners of land and property.

"Explain yourself, old man," said Jack, turning to his friend, as they bowled along. "Why did you imagine I would not come?"

"Oh, you were spending your vacation at your brother Tom's, and they had a lot of pretty girls there, and so—"

"Just stop right now, Sam; that is the identical reason I ran away."

"What, from the girls?"

"Exactly. Tom's wife is a regular little match-maker, as you know. She had those girls out partly with that very idea—thinks it is time I was settled, and all that, you see. I got so fearfully tired of their dressing and flirting and making eyes at a fellow, and talking as if butter wouldn't melt in their mouths—ah, bah! It makes me sick now! Don't you ever believe I was going to stay there, when I could be out here with you and Miss Mime—not much!"

Sam threw back his head and gave a hearty laugh.

"Mighty glad we are to get you on any terms, Jack, lad; but aren't you a trifle hard on the girls? They are not all like that."

"Well, most of 'em are. I'm sick of the whole business. Haven't got a girl waiting for me here, have you? I'll go straight back if you have."

"Then I wouldn't tell you if there was one. But no, there isn't a female soul on the place except sister Jemima and her cook and housemaid, nor very many in the near neighborhood.

"Sure you have not a few coming for a little visit?"

"No, not expecting any. Oh, yes, Mime did get a letter from our respected grandmama saying she might drop in on us this week. Nobody else, I assure you."

"Drive on, then. We will let the good grandmama come if she wants to. She won't interfere with our shooting and fishing. I'm content to stay as long as you'll let me, Sam."

"Then you won't go back to the city grind in a hurry, tell you that! Get up, Dan! Show your heels to our friend, can't you? He's a little dandy, Jack! Cost me a cool two hundred, and I wouldn't look at three for him any day."

The girls were quite forgotten in Sam's pet pony, and before they reached Woodside Jack's face had entirely lost its tired look of disgust with the world in general. Miss Jemima (or Mime, as she was usually called) was standing on the front veranda to welcome them and bid them hasten to get ready for supper, or her nice hot rolls would be spoiled.

They were soon seated at her hospitable board, and Jack did full justice not only to the rolls, but the fragrant coffee, rich cream, fresh home-cured ham and eggs, and all the other dainty dishes in which Miss Mime's heart delighted. After supper they paid a visit to the stables before dark, and laid plans for a drive to Flat Rock on a fishing trip next day. Two or three similar days flew rapidly by. Jack declaring he would not exchange the good times he was having with Sam for all the girls in the world. Four days after he came Sam was obliged to go to a neighboring town on a bit of law business—he had to be a witness in a land suit for another man—and Jack, not caring to put through a dull day in a country court, intended to spend the time hunting in the woods around the farm.

While they sat at breakfast, or rather as they were rising from the table, a telegram was handed to Sam, which he hastily read, and gave an exclamation of vexation.

"Now, hang it all!" said he. "I've got to go on this troublesome case, and here's a message from grandmother—she will be at Hartville this afternoon, and wants me to come over and meet her there."

"Oh, is grandmother coming to-day?" asked Mime, stopping in the door on her way to the kitchen.

"So this says; and what to do I don't know, unless you will go over, Mime?"

"Can't I go?" put in Jack. "I am at the service of the venerable lady for any length of time, and of course as she is old, and not apt to be very strong, she must not be left alone at a strange place. I'll go for you, Sam, with pleasure."

Sam had turned to Jack with a queer expression on his face, and Miss Mime began to say:

"What? Grandmother? Oh, she's—"

But Sam hastily stepped up to her, said something in a low tone, and turned to his friend.

"The very thing, Jack! I do wish you would go. You can drive Dan to the buggy, and I'll take old Cob to the road-cart."

"All right; I'll go. How shall I know the dear old lady? Can you describe her, as she will not know me, of course?"

Sam had his back turned and his voice sounded odd as he replied:

"Oh, the station-agent at Hartville knows her. She often comes that way. He will show her to you. Be sure to take good care of her, Jack. Ha! ha!"

"To be sure I will. What are you laughing at, Sam?"

"Oh, only an idea that struck me—something about Donovan's case. Good-by, old boy. I'll be at home as early as possible. Don't forget to meet Grandmother Dermott. Good-by. Ha! ha! ha!"

Sam went out leaving Jack wondering what tickled him so; but as he was not familiar with the Donovan case, of course it might be a very funny one.

At three o'clock that afternoon Jack drove up to the little dingy railroad station at Hartville, and hitched Dan to a convenient post. He drew out his watch, and glancing at it, observed:

"Not much time to spare! Train's due now, if Sam was right. Ah, there it comes! Where's that agent? Never mind him, anyway! If only one old lady gets off, I shall know it is Sam's grandmother without any introduction. I'd better be near; the dear old soul may need help to get off."

Jack gallantly drew very close to the train as it stopped, and stood waiting for his passenger. Half a dozen countrymen, two women with babies in their arms, and a fat colored woman, nobody else, except a slender girl in a stylish black suit, at whom even woman-hater Jack had to cast a second glance, she was so exceedingly pretty and attractive.

"Where's my old lady?" he said to himself. "Something must have happened, for she is certainly not here. I wonder why she did not come?"

But as she had not, he was about to go back to the buggy, when he saw the handsome girl standing near him with a perplexed look on her lovely face.

Jack stepped up, lifting his hat.

"Beg pardon, miss, but can I assist you? Are you looking for some one?"

The lady gave him a smile, and answered:

"Yes, I did expect some one to meet me from Woodside Farm, but no one is here. Are there any conveyances to be hired at this place, do you know?"

"I do not, indeed," returned Jack, astonished. "But I come from Woodside myself. I, too, expected to meet a lady who has not arrived—Mrs. Dermott."

The lady smiled again, and said, brightly:

"Oh, then we are all right! I am Mrs. Captain Dermott, and you must be the friend Sam wrote they were expecting from the city."

"I am Sam's friend, certainly, but—but—there is some mistake," stammered Jack. "I—I came to meet Sam's grandmother, a very old lady."

A merry little laugh was his answer.

"I think there is no mistake, Mr.—"

"Cameron," Jack barely had sense to supply.

"Thank you, Mr. Cameron; then I believe it is all right! I am Sam's grandmother, though perhaps not so old as might have been expected. Did you ever know that Captain Dermott was married only two years before his death? And I was not sorry, even if he was an old man, for he was so good to me," she added, honestly, a regretful look coming over her sweet face.

Jack made out to stammer again:

"I—I never heard. I did not—I was not—oh, excuse me, miss—madam, I mean—but I am really knocked off my pins, if you will forgive the slang, with this surprise. I was prepared for a white-haired, feeble old lady, who would need help in getting off the train, but not—not this, you see!"

Another merry laugh from Mrs. Dermott.

"I wonder Sam or Mime did not tell you better. Why did not Sam come with you?"

"Had to go over to Cloverton on somebody's lawsuit. So I took his place. And really, Mrs. Dermott, I'm not always such a fool! Pardon me, and tell me where to find your baggage. I will see to having it sent out."

"Thank you. There is only one trunk. Here is the check."

She gave it to him, and he had presently engaged the wagon to bring it to the farm, had put her into the buggy, and was driving back to Woodside, for once in his life almost dumb. He simply could not talk, he was so provoked at himself for making so great a dunce of himself, and at Sam, whom he saw had played a clever trick on him.

"I know now what he laughed at this morning," he thought, savagely. "Oh, but I'll get even with him for this, if I have to be his grandfather to do it!"

When they stopped at the door Mime came running out to meet them.

"You found her, did you?"

"Yes, I did, and I made a big fool of myself, Miss Mime, and I believe you and Sam planned it all, too!"

Then they all three broke into a laugh, and when Mrs. Dermott, after she had kissed Mime, held out her white hand and said, pleasantly, "But you mustn't be angry with me, Mr. Cameron, for I was as innocent as yourself. Shall we be friends?" he could do nothing but extend his own and say, humbly:

"It shall not be my fault if we are anything else, I don't care whose grandmother you are!"

But when he was alone with Sam that night, didn't Sam catch it?

"I declare, I never thought but what you knew," he said, when Jack would let him speak at all. "Grandfather Dermott married a young girl a few years before he died, and of course by law she is our grandmother."

"She don't look like a girl who would make that kind of a marriage," said Jack, thoughtfully.

"It was not 'that kind of a marriage' as you mean it. Grandfather was alone, and needed a woman's care and love. Cora gave it because she pitied him, much more than because she knew he would leave her a fortune when he died. She's a lovely woman, and might have made several good matches since grandfather went, but she wouldn't listen to them. Jack, she'd suit you to a dot."

"Perhaps I wouldn't suit her, though. Sam, when you saw I did not know this morning, why didn't you tell me?"

"Well, then, I must confess it struck me to carry out the joke, and let you find out for yourself, so I stopped Mime when she was going to tell. Don't be mad, old fellow."

"I won't promise; it depends. I'll tell you what I will do, if she don't say no, I'll pay you up by making myself your grandfather, Sam."

"Go in, Jack! Go in, and win!"

Jack did win, for the last letter Sam had from him was written while he was on his wedding trip, and was signed "Your affectionate and happy grandfather."

WHAT A RUBBER-TREE IS

Let me tell you just how a rubber-tree looks. Many of you think you have seen in our hothouses the plants from which our rubber comes. You are mistaken. The rubber-tree, with its thick, glossy green leaves, which you have seen is that which produces the gutta-percha. It is nothing like the great tree from which comes the best rubber of commerce.

The real rubber-tree is not unlike other forest trees. If it was not pointed out to you you might travel throughout the Amazon valley and without you saw the rubber-hunters at work you would not know what it was. It looks much like the English ash, and it grows to a height of more than sixty feet.

Its bark is silver gray where it has not become black by tapping. The trunk of the tree is about as big around as a man's waist. Where it has been tapped it often swells out at the base, so that it is much larger. It blossoms in August, being then covered with little white flowers. It is a nut-tree, and in December and January, when the nuts are ripe, the shells which contain them burst with a noise like a fire-cracker, throwing the nuts to some distance. There are so many nuts on each tree that a man could easily gather enough in one day to plant a hundred acres of land.

The trees can be easily grown in the right soil, and they thrive without cultivation. It takes, however, from fifteen to twenty years before they are old enough for rubber. This is too long for a man to wait on the Amazon, and at present the trees which produce rubber are wild.

The rubber comes from the sap of this tree. The tapping is done from the ground from the roots to as high up as a man can reach, and sometimes still higher. The trees are not bored with augers, as our maple-trees, nor are they scarred like the turpentine pine-trees of our Southern states. The tapping is done with a tomahawk or hatchet which has a blade an inch wide. The rubber-gatherer makes a light gash in the bark with this hatchet, just deep enough to go through without cutting the wood. As he draws out the hatchet a milk-white fluid oozes out in drops. The fluid is as thin as milk. It is much like the juice of the milkweed. The tapper now takes a little cup of tin or clay about as big as an after-dinner coffee-cup, and fits it into another cut which he makes below the gash, so that the drops of milk run down into it. He makes three or four gashes in each tree, fitting each with its cup, and then goes on to the next. He continues his work until every tree allotted to him has been tapped.

He does this early in the morning when the sap runs best. By noon he has gone again from tree to tree and emptied the milk from the cup into a gourd-like bucket. Each cup will have a teaspoonful or so of milk, and if for his morning's work he gets a gallon of fluid he has done well. The milk flows slower and slower as the day goes on. The air coagulates it and after a few hours the sap has stopped up the wound.

A rubber-tree which has been tapped looks like a mass of festering sores. The bark, of a smooth and beautiful silver gray where it has not been touched, becomes scarred and warty by the wounds of the hatchet. As the wounds close tears of yellow rubber sink down in the bark about them. This comes out after the cup has been removed. It is carefully picked off and is sold as scrap or second-grade rubber, bringing from twenty to fifty per cent less than the rubber gathered in the cups, which can be properly cured.

I neglected to say where the rubber-trees are found in the forests. There is no such thing as a rubber grove or a rubber forest. The trees do not grow in groups, but they are scattered among other trees, so that you often have to go long distances from rubber-tree to rubber-tree.

The forests are divided up into paths of from sixty to one hundred rubber-trees. The paths lead in and out of the woods, now crossing streams and now going through swamps, until all the trees on them have been reached. Each path is allotted to one man, who gashes the trees and gathers the rubber upon it. The size of a plantation is known by the number of paths or roads it contains. There are some plantations which contain more than 1,000 roads.

HOW THE LAW DEFINES SOME WORDS

Legal phraseology is so involved that the layman has sufficient trouble making head or tail out of a long legal document, but when lawyers, judges and courts of appeals fall out over the definitions of ordinary English words it would seem that something ought to be done to help them out.

In law words are held to be worth nothing except in connection with the intention with which they are used or taken, and the animus of a look or other expression of countenance is held to be quite as capable of correct interpretation as a spoken word. Words are to be understood in their plain, ordinary and popular sense unless they have gained, in respect to the subject matter, a peculiar sense by the known usage of trade distinct from the popular sense of the same words.

But the trouble is that after laying down these plain and comprehensive dicta one must take into consideration the different meanings which the same words have.

The definition of the word "car" has caused much litigation. A certain street-railway franchise was granted on condition of the payment of the "annual license fee for each car now allowed by law." An old ordinance at that time required license fees for each "accommodation-coach" or "stage-coach." It was held that the city was entitled to the same license fee on a car as was fixed by the old ordinance on a stage-coach. The defendants contended that as the word car was not mentioned in the old ordinance it did not apply to their cars. The court declared that the contention of the defendants that the ordinance enumerated a stage, an accommodation-coach and a stage-coach, but was silent as to a railroad-car, or even "car," was not forcible, as in definition a car or coach or stage or stage-coach is the same.

The confusion prevailing in this country as to the words station and depot has led to

many lawsuits. Properly a railroad station is a place where railroad trains regularly come to a stop for the convenience of passengers, taking in and discharging freight, etc. It is distinct from depot, a term properly used to designate the buildings at a station. Within the meaning of a New Hampshire statute, prohibiting the expulsion of any person from the cars for the non-payment of fares except at a passenger station, it has been held that the station must be at least a stopping-place where passenger tickets are sold. In a case where this was the point at issue the instructions for the plaintiff defined the term "regular station" to mean a place on the railroad where passenger-trains usually stop to let passengers get on or off such trains, while several instructions, asked by the defendant and refused, defined such term to mean the town or village in which a railroad company may have its passenger-depot building, and not the depot platform of a railroad company.

A Connecticut statute provided that no railroad corporation should abandon any depot or station on its road after the same had been established for twelve months except by the approval of the state railroad commission.

Store and shop are almost as much confused in this country as depot and station. In England a store is a building. A place where goods are sold is a shop. In this country we call it indiscriminately shop or store.

In Massachusetts it has been held that an indictment for breaking a store cannot be supported under a statute making it a felony to break up any dwelling-house, shop, mill or other building whatsoever with criminal intent unless it be stated in the indictment that the store is a building. But in that case the judge doubted "whether it would be necessary to aver it, as in that state the word has a settled, known meaning and is not used otherwise than as and for the name of a building." It has been held several times that a shop must necessarily be a structure of some sort.

In Massachusetts also an ice-house in which a dealer has stored his ice was held not to be a store within a tax statute, the court affirming that the common use in this country of the word store when applied to a building is to designate a place where traffic is carried on in goods, wares or merchandise, and not to designate a store-house.

Desk-room is not a store under the law. A Maine statute provided that all personal property employed in trade should be taxed in the town in which it was so employed, providing the owner had his store or shop in such town. A stock-broker who merely had desk-room in a city was held not to occupy a store or shop within the statute.

A bakery was decided to be a store in an insurance case, and in a burglary trial a saloon and restaurant was held to be a store.

The word "article," so often used in oral and written contracts, is flexible enough to cause much difficulty. A transfer company received a package containing three cases of a particular drug separately addressed to the plaintiff and then wrapped in a single package similarly addressed. The receipt or bill of lading contained a clause stipulating that the holder should not demand more than $50 for any loss or damage to the article forwarded. Only one of the cases reached the plaintiff. It was held that the "article" forwarded was the single package and that the plaintiffs were not entitled to recover $50 upon each of the missing cases, but if the cases had contained different kinds of drugs, and the company had had knowledge of that fact, the decision would have been different.

In another case the words "any article" caused trouble. A printed notice was issued that the carrier would not be liable for an amount exceeding $100 upon "any article," but this was held to qualify his responsibility not to a trunk or piece of baggage and its entire contents in gross, but as to any article in a piece of baggage not exceeding $100 for any one item.

The indiscriminating use of the words guest, boarder and lodger have caused no end of litigation. A "guest" legally is one who makes no bargain for any specified time, who comes and goes as he pleases and pays only for the actual entertainment which he receives. Merely staying a long time at a hotel does not convert a "guest" into a boarder.

To board, according to the law, is to receive food with or without lodging for a compensation. A lodger has been defined by the courts as one who lives at board or in a hired room or who has a bed in another's house for a night.

Directly as objects of litigation, or indirectly as evidence, books are continually finding their way into court, and much labor and eloquence have been expended in efforts to prove what is and what is not a book. In a case where it was decided that a musical composition printed on a single sheet of paper was a book within the meaning of the old-time statute the court set forth that "There is nothing in the word 'book' to require that it shall consist of several sheets bound together or stitched in a cover. 'Book' is from the Anglo-Saxon 'boc,' which is from beech-tree, the rind of which supplied the place of paper to our German ancestors. 'Book' may therefore be applied to any writing, and it has often so been applied in the English language. The horn-book consists of one small page protected by an animal preparation, and in this state it has universally received the appellation of a 'book.' So in legal proceedings the copy of pleadings after the issue joined is called paper-book or 'demurrer-book.' An oath as old as the time of Edward I. runs, 'And you shall deliver into the court of exchequer a book fairly written,' etc., but the book delivered has always been a roll of parchment."

An act early in Victoria's reign declared that a book shall be construed to mean and include every volume, part or division of a volume, pamphlet, sheet of letter-press, sheet of music or dramatic piece. A magazine or periodical is a book in the eyes of the law, but a newspaper is not.—Atlanta Constitution.

QUEER DISEASES, QUEER CURES

One physician has discovered a new use for the anonymous letter. He has observed that in cases of hysteria, melancholia, rheumatism, etc., patients have sometimes been cured by a violent and sudden shock. That fact being established, the doctor said to himself, "Why not shock my patients into good health?" and since the idea occurred to him his life has been not only profitable, but also entertaining. He suits the shock to the case, but says that he has had better results from anonymous letters than from any other method. A few carefully constructed letters, full of innuendo, abuse and threats of injury, will give a patient an absorbing interest in life. He will forget his ailments, and that is a long step toward recovery. Incidentally the treatment may make things interesting for the family of the convalescent, but that's a detail. The physician who invented the treatment says that results have been most gratifying.

This is a day of queer diseases and queerer cures. A case of nervous exhaustion, dyspepsia or rheumatism can give one a long lifetime of interesting and varied experiences. One may lounge among the vineyards of southern France and eat unheard-of quantities of grapes in the name of medical science. One can take the open-air cure in the Tyrol, where the patients, clad simply and sufficiently in one thin, abbreviated tunic, ramble over the hills, or minus the tunic, lie on the grass and soak up sunshine. There is the koumyss cure on the Russian steppes and the starvation cure in Germany. Germany is the native heath of the barefoot fraternity, too, where devout believers in Father Kneipp can paddle merrily about in the morning dew, and arrayed in conventional purple and fine linen, but still barefoot, invade the neighboring towns on Sunday.

A Paris doctor has designed a dry bath of Arctic temperature which discounts the most noble efforts of a disapproving chaperon. A tank of metal, lined with fur, is sunk in a larger outer tank, and the space between the two is filled with an evaporating fluid, which lowers the temperature of the inner tank to about one hundred degrees below freezing. The nervous patient is put into this refrigerator and kept there for a few moments, the treatment being repeated every other day. The effect is said to be marvelous, and disease is frozen out.

Malta's way of treating rheumatism is a trifle heroic, but a generation brought up on mustard-plasters and electricity ought not to object to it. The patient is stripped and bees are cordially invited to settle upon his body. It amuses the bees and cures the rheumatism, so it seems to be a philanthropic system all around. The poison in the bee-stings is said to neutralize the acid in the blood which is responsible for the rheumatism.

SOMETHING ABOUT COCOANUTS

"There are three stages or different conditions through which the milk of the cocoanut passes, in each of which it is excellent," said Capt. Nathan Truelove, sometime master of a trading craft in the South Pacific islands. He had paused at a fruiterer's stand and was examining a pile of cocoanuts in the husk displayed there with an air of interest.

"The first is when the meat and milk in the green cocoanut have not yet been separated and are blended together in a semi-fluid pulp, about of the consistency of water-ice, and may be scooped out and eaten with a spoon. The second is when the meat is newly hardened against the inside of the shell and the hollow within is filled with the fragrant, cooling milk, one of the most beautiful and refreshing draughts that a man can find in the tropical lands. The third stage, to which few people outside the tropics are initiated, is when the cocoanut is sprouting and the embryo palm-tree, formed from the milk, and the best of the meat lies in the hollow that is left, a kernel within a kernel, so to speak, and one of the daintiest morsels that a man ever lifted to his mouth. I was in hopes to find a sprouting cocoanut among these, but there is none. Here is where the green sprouts are to be looked for—in the monkey's face, as the boys say—the three round depressions which they call a mouth and eyes in the small end of the nut.

"What we call milk in the cocoanut the South Sea people call water. Cocoanut-milk with them is the kernel grated fine and mixed with this fluid. The resulting compound is of the consistency of cream, milk-white in color and delicious to the taste. It is so rich that one can eat but little of it directly, and it is principally used, mixed with other substances, in preparing dessert dishes and as a frosting for cake. In the Micronesian and other tropical Pacific island groups the cocoa-palm grows everywhere that enough earth can be found above the coral reefs to give its roots a hold, and is the most all-around useful tree there is. Its nuts serve the natives for food and drink and are a chief resource for barter.

"The juice drawn from the undeveloped flowers of the cocoa-palm just before their budding is very sweet and pleasant to the taste, and is often given to sickly or weaning children. When allowed to ferment it becomes 'toddy,' the favorite tipple of South Sea Islanders, and by distillation the fermented juice yields a potent liquor, resembling the East India arrack and known by the same name. Boiled down and sugared, the palm-juice makes the delicious juggeree which the Javanese buin-boatmen bring out to sell to the passengers and sailors of ships that put in at Batavia and other parts of Java. The wood of the cocoa-palm, commercially known as porcupine wood, is valuable in the making of furniture and house-trimmings, and from the husks of the nuts are made the coir rope which serves as rigging for native craft, and is worked into mats and baskets.

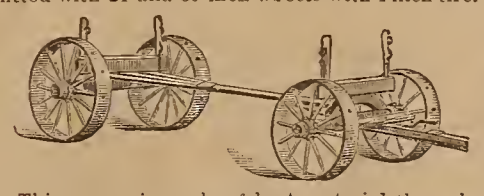
"It is in the production of copra that the cocoa-palm has its chief commercial value. Copra is the meat of the cocoanut dried for export, to be used in the making of oil. In earlier times the South Sea natives grated the cocoanut meat and expressed the oil themselves in a rude lever-press, to barter with cruising traders for tobacco, liquor and trinkets. Now the meat is cut by them into pieces of such size and shape as will enable them to pack it to the best advantage, and is mostly sent to regular ports of shipment, where its owners receive pay in goods or money. The copra is shipped to Europe or America to factories where the oil is expressed to be applied to a variety of uses. Cocoa stearin is much used in candle-making, and the oil enters largely into the marine soap which can be used for toilet and laundry purposes in sea-water. When it is considered that 1,000 nuts will make 500 pounds of copra, which will yield twenty-five gallons of oil, one of the vast commercial possibilities of our new Philippine possessions becomes evident."—New York Sun.

MARRIAGE CUSTOMS

Many curious incidents and customs are connected with marriages in northern climes. Wedding presents in Norway are not of the expensive but useless kind that they are with us. They consist of such things as pots and pans, plates and dishes, a feather-bed, half a dozen sheep, a sack of potatoes, and so forth. Sir G. W. Dasent says that the Norwegians, in reference to marriage as to other matters, put their best foot foremost and try to make the most of things generally. A lad went out to woo a wife. Amongst other places he came to a farm-house where the people were very poor; but they wanted to make him think that they were well-to-do. Now, the father had got a new arm to his coat. "Pray, take a seat," he said to the wooer; "but there's a shocking dust in the house." So he went about wiping all the benches and tables with his new coat-sleeve, but he kept the other behind his back. The wife had one shoe much better than the other, and she went stamping and sliding with it up against the stools and chairs, saying, "How untidy it is here; everything is out of its place!" Then they called out to their daughter to come and put things to rights; but she had got a new cap, so she put her head in at the door, and kept nodding and nodding, first to this side and then to that. "Well, for my part," she said, "I can't be everywhere at once." In this way the wooer was led to believe that he had come to a well-to-do household. Many superstitions prevail in Sweden with regard to marriage. It is said that if a girl be fond of cats, she will not be an old maid, as we should say, but have a bright day for her wedding. The Swedish bride sometimes wears a coronet of myrtle, or when that is not procurable, of colored paper. Here, as in Norway and other countries of northern Europe, there is too much eating and far too much drinking at weddings. In Sweden the repasts on these occasions continue for hours. When asked to take your place at the table, it is considered polite to make as stout a resistance as possible. During the repast a collection is made for the bride and sometimes also for the poor of the parish. In Siberia there is a good custom that a bride, on coming to her husband's house, has to give a dinner prepared with her own hands as a test of the education she has received. If she succeeds in gratifying her guests, it is taken as a proof not only of the young woman's own excellence, but also as a recommendation of her whole family by whom she was instructed so usefully.

A LOW WAGON AT A LOW PRICE

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Co., Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, that is only 25 inches high, fitted with 24 and 30 inch wheels with 4-inch tire.



This wagon is made of best material throughout, and really costs but a trifle more than a set of new wheels and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

SOUVENIR FANS

IT IS always convenient to have a number of palm-leaf fans tied with pretty ribbons hanging on the veranda. These fans can be made into charming souvenirs of "one summer" by adding those uuusual little brilliants known as ideas. It is done in this fashion:

From day to day, as observations are taken, uote down very neatly and very briefly all the birds you can discover, and at the close of the season your fan is an interesting souvenir of the ornithology of the neighborhood. On another fan, as the days pass, note down all the wild flowers you have met and whose names and habits you are acquainted with. This may fittingly be called a flora fan. If interested in music note down all the sounds of nature, the buzzing of honey-bees, whirring of grasshoppers, stirring of leaves, silvery octaves of falling rain, all the notes shrill and loud, softened and sweet, that thrill together in the stringed orchestra of a summer's day.

Students of the social and political aspects of the day will enjoy a fan devoted to leading events in history. Such a fan would be of special value this summer when so many interesting events circle around the Peace Conference. Recent and curious inventions might occupy another fan, and a fan devoted just to topics of conversation you have listened to will give endless diversion.

These fans will be as rare and valuable as precious china if preserved long enough, and like odd tea-cups will help conversation drift from meaningless gossip into new, fresh and delightful currents. Conversation is too often wasted in platitudes, when it should be oue of the finest and richest means of education.

FRANCES BENNETT CALLAWAY.

PRUNES

Any number of the feminine readers of FARM AND FIRESIDE who con these household pages regularly, at first thought, and upon first glance at the subject of this article, will consider it one of so little importance and interest that they will be tempted to pass it by. Indeed, they may pass it by without giving it a thought beyond one of contempt. But I hope every one of our housewives will read, for there is not only "food for thought" in the talk, but there is food for brain and nerve in the much-despised fruit under discussion.

I term it a "much-despised fruit." And yet I believe no one ever came to really despise it, either, though many people of exceedingly moderate means and an overpowering fruit appetite have practically lived on prunes, until to say they were heartily tired of them would be expressing it mildly. I always did like prunes myself—that is, most always. I must confess that there was a time, however, when we lived so long "away out West," in a day when fruits were scarce and high, and when our personal finance was at low ebb, "times hard," and pruues correspondingly cheap, for some reason, I became so thoroughly tired of them that I would have passed by the best article ever written with so prosaic a subject as the one I have chosen. At that time, for a few years, prunes were "one too many for me;" and even the head of the household, once an inveterate prune consumer, ceased to take kindly to this manner of sauce. In fact, since learning of the soothing aud medicinal qualities of prunes, I have wondered if his insatiable appetite for, and his great consumption of, the great plump "chunks of (prune) plums" may not have accounted somewhat for his good nature and happy disposition, and that always manifest spirit of ability to see at all times the bright and hopeful side of life.

Fifteen or twenty pounds of prunes for a dollar makes very cheap fruit, and especially so when taking into consideration the fact that very little sugar is needed to make them palatable and "plenty sweet." However, the best grade of sweet prunes comes a little higher—three pounds for a quarter, twelve or thirteen pounds for a dollar. It pays to buy the best if you can; but rather than no prunes I would take the twenty-for-a-dollar kind.

To have them at their best wash well, and put to soak over night in cold or warm water, not hot water. Long, slow soaking makes theu plump beautifully. Stew them a long time gently, and stew them in the water they were soaked in. Before they are sent to the table I prefer to pit them. With a skimmer they are lifted from the juice about them, and one by one they are carefully pitted between fingers and thumb. When eating them with bread and butter it spoils all the pleasure of the dish to have the pits grating against and between the teeth.

But it is the medicinal side of the prune question that I would call attention to particularly. A physician of one of our large western cities claims to have proven the prune a moral agent, and full of properties of a medicinal nature; and it is said that European authorities on dietetics took up the matter and began a series of investigations, being very much interested in their subject and in the physician of so pronounced prune opinions.

The medicinal properties of the prune act directly on the nervous system and upon the nerve centers. This same physician says that when people are cross, and not honest and pure and true, and are uncomfortable to live with, nine times out of ten the nervous system is out of order, and that prunes will cure them. He advises eating them in and out of seasonable hours (mealtimes). "Eat plenty of prunes," he says. "They will set you straight every time." The doctor claims to have made prunes a special study, and tells some wonderful stories of even the moral effects of prune dieting that have come under his observation. He says it has made the most unruly mortals tractable and docile, and has been known to make a whole houseful of unruly, "incorrigible boys" manageable and good-natured. Prunes to be eaten as a medicine, he says, should be simmered at least three hours, and without sugar. We like them best without sugar; that is, I do. The head of the household says I need never speak for him when saying that cookery of almost any kind is better without sugar, for he begs to disagree with me. Plenty of sweets and sugar in everything best suits almost all men.

One of the prettiest little stories of accomplished self-government, after a long time of irrepressible aud insufferable hilariousuess as the direct outcome of overwrought and broken-down uerves, is told by a girl who claims her whole life was changed through the beneficent effects of a prune diet, as prescribed by a physician to whom she went in despair. She confided to the good doctor that she had passed beyond her own control, and that she was broken in spirit and health, and insisted that something almost superhuman would have to intervene between herself and her distracted nerves or she would go mad. He laughingly told her that all she needed was prunes—just plenty of prunes. She scoffed the idea to scorn at first, but she concluded to take the doctor's advice aud follow out his prune prescription. In less thau a fortnight, she claims, she felt like a new creature, and conducted herself accordingly. She had been of a hilarious, nagging, irritating nature—happiest when making some one else ill at ease and unhappy and uncomfortable in general. She had not really intended to be hateful and irritating, but was in some way irresistibly led on by the general tenor of her inner tempter to keep things stirred up, and people's tempers upon the keen edge of reseutment. When her friends began to question her concerning her changed manner and appearance, she had ample proof of the efficacy of prunes, and declared to them that it "was all on account of a prune diet."

"Why," said one of her chums who had not seen our prune friend for some three or four weeks, "what has changed you so? The whole expression of your face has changed. You seem to have so little to say, and your voice has growu gentle and low. It sounds sweetly. Your complexion is lovely and your eyes are so bright, and there's such a spirit of content about you. Is it love that has overtaken you?"

"No," answered the prune advocate, "it isn't love; it's prunes. Say, waiter," to the man who presented himself at the table where the two girls had chanced to meet at dinner-time at a down-town restaurant, "please bring me a big dish of stewed prunes, some bread and butter and a glass of milk."

Her companion ordered an oyster pate, strawberry shortcake with plenty of cream, and a bottle of ginger-ale, etc., in the meantime poking fun at her friend because of the prune and bread and butter lunch just ordered. "Laugh all you please," she replied; "but prunes have made a new girl of me. I tell you the prune is a great moral ageut, and medicine besides. It drives away fits of depression, makes one sweet-tempered and kindly disposed, and helps a nervous person to get hold of herself to regain a normal equilibrium. You already see what a change and what wonders it has worked in me."

Did you ever try confining yourself to prunes and bread and butter for one out of the three daily meals? If not, try it, my dear readers. You will find it a lunch fit for a king. You will enjoy it, and you will be a hundred per cent better off in physical condition. If you are one of the feminine mortals who lament the lack of sufficient flesh for beauty, use plenty of milk as a drink with this meal, and rich cream on the prunes if you love cream. If oue of the obese afflicted and troubled, leave the glass of milk alone and dispense with the cream. In truth, if predisposed to put on flesh to an altogether too superfluous extent—But that is another story, and we will talk of it another time.

ELLA HOUGHTON.

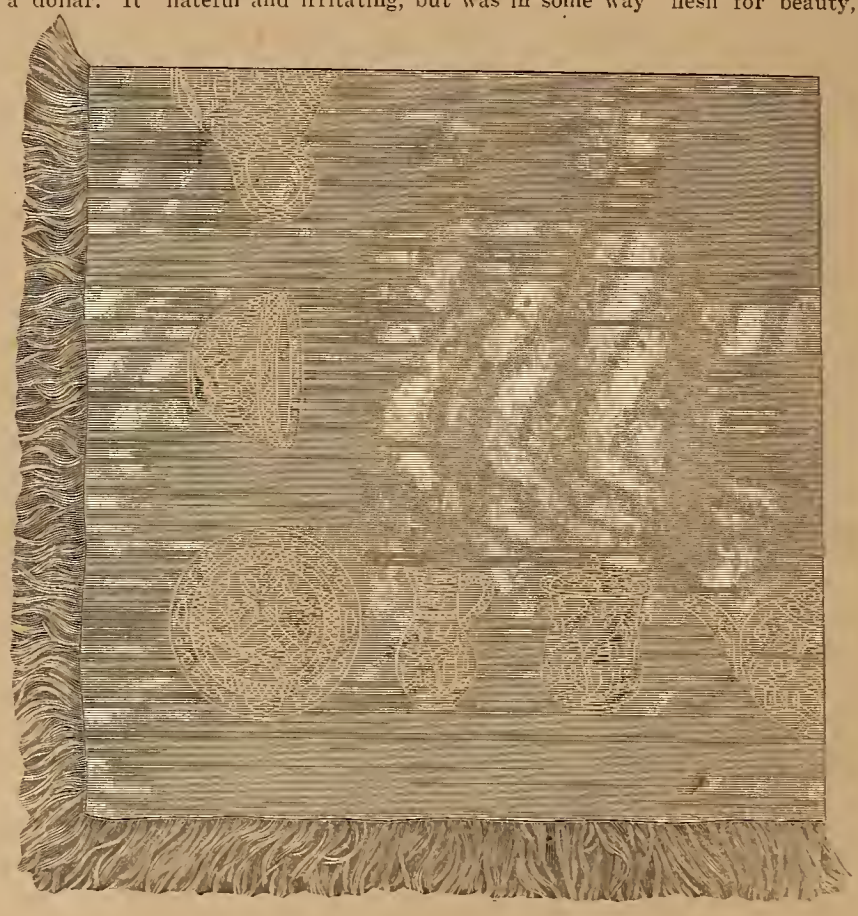


TABLE-COVERS AND LUNCH-CLOTHS

The one lunch-cloth illustrated is of very elegant imported round-thread linen. The decorations stamped on it are called Wedgewood, and are worked in the blue of that particular ware. It is a very elegant affair when finished, and would require a great deal of time and patience to complete.

The other is a cloth of the same material worked in wools in the original shades of the small sunflowers and poppies. This work is more rapid than the first one, and very satisfactory.

The Battenberg design is always a favorite with every one, and always pays oue for the time expended upon it. B. K.

DINNER FAVOR

Those who are always looking for the latest novelty will be interested in a dinner-card that was used at a very "swell" dinner, more particularly since it can very readily be fashioned by deft fingers, skillful brush and water-colors to serve in similar manner at some social function, and be quite as much a work of art as the more expensive original creation.

This dinner-card was made in the shape of a large rose-petal measuring perhaps one and three quarters by two inches, and curved and tapered to a point at its base, looking as if it had been plucked from a magnificent Bridesmaid half-blown bud, so perfect was it in shape and coloring.

It was made out of very thick white paper, daintily tinted from a deep rose-pink at the top to almost a white at the base, the point of the base bearing a dot of yellow. The upper edges of the petal were curved back, and across the face was written in gold letters the name of the guest. The back of the card was similarly tinted in rose, but showed a fine tracery of delicate graceful veins. This card, designating the place intended for each guest at the table, served also as a souvenir of the occasion.

EMMA LOUISE HAUCK ROWE.

THE BOYLESS TOWN

A cross old woman of long ago
Declared that she hated noise;
"The town would be so pleasant, you know,
If only there were no boys."
She scolded and fretted about it till
Her eyes grew heavy as lead,
And then, of a sudden, the town grew still,
For all the boys had fled.

And all through the long and dusty street
There wasn't a boy in view;
The base-ball lot where they used to meet
Was a sight to make one blue.
The grass was growing on every base,
And the paths the runners made;
For there wasn't a soul in all the place
Who knew how the game was played.

The dogs were sleeping the live-long day—
Why should they bark or leap?
There wasn't a whistle or call to play,
And so they could only sleep.
The pony neighed from his lonely stall,
And longed for saddle and rein;
And even the birds on the garden wall
Chirped only a dull refrain.

The cherries rotted and went to waste—
There was no one to climb the trees;
And nobody had a single taste,
Save only the birds and bees.
There wasn't a messenger-boy—not one—
To speed as such messengers can;
If people wanted their errands done
They sent for a messenger-man.

There was little, I ween, of frolic and noise,
There was less of cheer and mirth;
The sad old town, since it lacked its boys,
Was the dreariest place on earth.
The poor old woman began to weep,
Then woke with a sudden scream;
"Dear me!" she cried, "I have been asleep;
And oh, what a horrid dream!"

—R. C. Tongue, in St. Nicholas.

KEEP THE CHILDREN AT HOME

IT IS a deplorable fact that a great majority of the parents who live in the small cities and towns of the country are losing control over their children. There is a growing laxness in this respect among parents all over the country, but especially is this the case in small cities and country towns. Visit almost any of these that do not have a curfew ordinance upon their city statutes and you will see crowds of boys and girls, from six to sixteen years of age, congregated upon the streets, shouting, laughing, and indulging in the street slang so common in towns and cities. Thus, through the negligence of parents the very best learn to associate with the very worst, and are led into all the bad habits that result from such associations.

Many children who attend church and other religious meetings often collect upon the streets after services are over, and discuss all the latest town topics until long after every one else has retired. To many readers this may seem to be a matter of little importance, but it is a matter the importance of which can hardly be overestimated. In most of these cases the child begins this street life at that age in life when he is most easily led into vice by older and more experienced children. Like the twig which can be made, by outside influences, to grow in any direction, so the child at this age is most susceptible to outside influences for either good or bad. At no time in its life does the child so much need the refining influence of a good home and the constant care of a good father and mother.

A very large per cent of our criminals received the first lessons in their art upon the street. In fact, almost all of the criminals have come from that class of children who are to be found growing up on the streets of our cities and towns. Many parents are unconsciously, by their own criminal negligence, allowing their children to roam at will upon the street and grow up into all sorts of criminals. We expend millions of dollars annually for the support of schools and churches, in order that the race may improve, intellectually and morally, and then let our children run at large, where they acquire all the bad habits, but never a good one.

Few parents seem to realize the great responsibility which, especially in a government like ours, rests upon them as parents. It is high time that they arouse to a sense of their duty. The race must be improved, morally at least, and it is the duty of every parent to use his utmost endeavor to leave each succeeding generation better morally than the preceding one. The parent who does not do this is not discharging that solemn duty which he owes to himself, his family, his country and his God. In many towns and cities the authorities have been compelled to pass curfew ordinances, prohibiting children within certain ages from appearing on the street after certain hours. Thus the city authorities have been compelled to do that which it is the duty of the parent to do. If parents could be awakened to a realization of their responsibility, and could be shown the evil effects of street loitering, it would accomplish much good.

The problem of keeping children at home in towns and cities is one which seems difficult of solution, even for those who try to do so. It may be said that a child will not wander from a well-regulated home. Surely a home should be made so attractive that the child will choose it in preference to the street. The home should be made the most attractive place on earth for parents and children, and it is the duty of every parent to use his utmost endeavor to make it so. When this is done the child will not be seen on the street except it be necessary. Let parents treat their children with more kindness and respect than do the people whom they meet on the street. Entertain them with short stories containing good moral lessons. As soon as they can read provide them with an abundance of good wholesome reading matter suited to the age and mental development of the child. Great care should be exercised in the selection of this reading matter lest that be selected which is dry and uninteresting to the child, because not suited to his age and mental development. There is an abundance of good books suited to all ages and all stages of mental growth. They are so cheap that they are within the reach of all, so there can be no excuse for not providing every home with an abundance of them. Instead of telling them to run off and play in the evening after supper, gather them about you and entertain them with short stories containing morals. Take part with them in their games, and otherwise make them feel that you are somewhat interested in them. When other children come to your home to visit your children, do your very best to entertain them all, instead of telling them to run away and play, thus making them feel that they are unwelcome guests.

In this way they will become thoroughly permeated with those good moral thoughts and sentiments that lay the foundation of true manhood and womanhood. In this way the parent will be discharging his duty as a good citizen. In this way the parent will make the world happier by bequeathing to society true men and women instead of criminals.

STEWART A. BEALS.

BLOCK AND BAR LACE

ABBREVIATIONS.—K, knit; n, narrow; o, over; p, purl; b, bind.

Cast on 31 stitches.

First row—Slip 1, k 2, o, n, k 1, o, n, k 1, o, n, k 3, o 2, n, k 7, o, n 3 together, k 1, o, n, k 1.

Second row—K 3, o, n, k 1, o, n, k 1, o, n, k 7, p 1, k 5, o, n, k 1, o, n, k 1, o, n, k 1.

Third row—Slip 1, k 2, o, n, k 1, o, n, k 1, o, n, k 13, o, n, k 1, o, n, k 1, o, n, k 1.

Fourth row—K 3, o, n, k 1, o, n, k 1, o, n, k 13, o, n, k 1, o, n, k 1, o, n, k 1.

Fifth row—Slip 1, k 2, o, n, k 1, o, n, k 1, o, n, k 3, o 2, n, o 2, n, k 6, (o, n, k 1) three times.

Sixth row—K 3, o, n, k 1, o, n, k 1, o, n, k 6, p 1, k 2, p 1, k 5, (o, n, k 1) three times.

Seventh row—Slip 1, k 2, o, n, k 1, o, u, k 1, o, n, k 15, (o, n, k 1) three times.

Eighth row—K 3, o, n, k 1, o, n, k 1, o, n, k 15, (o, n, k 1) three times.

Ninth row—Slip 1, k 2, o, n, k 1, o, n, k 1, o, n, k 3, o 2, n, o 2, n, o 2, n, k 6, (o, n, k 1) three times.

Tenth row—K 3, o, n, k 1, o, n, k 1, o, n, k 6, p 1, k 2, p 1, k 2, p 1, k 5, (o, n, k 1) three times.

Eleventh row—Slip 1, k 2, o, n, k 1, o, n, k 1, o, n, k 18, (o, n, k 1) three times.

Twelfth row—B off 6, o, n, k 6, make one stitch, k 12, (o, n, k 1) three times.

Repeat from first row. L. A. PERKINS.

CABBAGE

He hath news from the lower country in cabbages.—Ben Jonson.

The cabbage is a valuable article of food, and is one of the most generally used vegetables, particularly in the farmer's household. Its nutritive properties and wholesome qualities, especially when combined with animal food, are well known by housekeepers. Medical opinions state that cabbage contains an essential oil, which is difficult for some stomachs to digest, but which may be removed by boiling in two waters. Overboiling extracts much of the nourishing qualities as well as the flavor of this vegetable, and should be avoided when cooking it.

The early varieties of cabbage should be used while young and tender, but that for winter is best after a touch of frost has ripened it. To cook cabbage, boil in one water until half done, take up, place in a colander, pour cold water over, let drain, return to the kettle, cover with boiling water, add salt, and let boil until done. Even after being cooked cabbage putrifies very rapidly, and gives out a very offensive odor, and should not therefore be left standing in the warm kitchen.

Cabbage may be served in a variety of appetizing dishes, thus making it acceptable on the family table several times a week during the cold weather.

STEWED CABBAGE.—Cut a head of cabbage into halves, let soak in cold water one hour, drain and shake dry; remove the stalk and chop fine; put into a saucepan, cover with boiling water, and let boil twenty minutes; drain, turn into a heated dish, and pour over a teacupful of cream sauce.

STUFFED CABBAGE.—Select a fine head of cabbage; pour boiling water over it, let stand fifteen minutes, drain, and scald again; shake dry. Make a stuffing of two tablespoonfuls of rice, half a pound of sausage, a teaspoonful of chopped onion and a tablespoouful of parsley; mix well. Open the cabbage to the center, put in a teaspoonful of the mixture, fold over the next layer of leaves, put in more stuffing, and continue until each layer is stuffed. Press firmly together, tie up in cheese-cloth, put into a kettle of boiling water, add salt, and let boil two hours. When done, carefully remove the cloth, stand the cabbage in a deep dish, pour melted butter over, and serve.

CABBAGE A LA FLANDENE.—Take off the outer leaves of a firm head of cabbage. Cut the head in slices, put into a saucepan, with a tablespoonful of butter, a slice of onion, two or three cloves, a small pod of pepper and a teaspoonful of salt; set over the fire to simmer slowly for one hour. Take up in a heated dish, pour over melted butter, and serve.

SOUTHERN CABBAGE.—Cut up a firm head of cabbage, put into a saucepan with boiling water to cover, let boil fifteen minutes, drain. Put into a saucepan, with a teacupful of vinegar, an ounce of sugar, a teaspoonful of salt and mustard each, half a teaspoonful of pepper and a tablespoonful of salad-oil; put over the fire for half an hour, add a beaten egg, with a teacupful of cream, stir, and let cook five minutes.

CABBAGE PUDDING.—Boil a small head of cabbage with a slice of bacon. When done, take up, chop fine, mix with a tablespoonful of butter, three well-beaten eggs, one teacupful of milk, two teaspoonfuls of mustard, with salt and pepper. Pour into a buttered pudding-dish, cover the top with stale bread-crumbs and bits of butter, and set in the oven to brown.

WARM SLAW.—Cut fine enough cabbage to fill a quart measure, sprinkle with flour. Put a tablespoonful of butter into a saucepan, with half a teacupful of vinegar, two beaten eggs, a teaspoonful of salt and a dash of cayenne; stir over the fire until hot, add the cabbage, with a teaspoonful of sugar, cover, and let stand five minutes. Serve hot.

ELIZA R. PARKER.

ECONOMY VERSUS SCRIMPING IN THE HOME

Foreigners frequently inveigh against American wastefulness, and with some justice. We have not, as a people, the thrift distinguishing some other nations. Our extensive country and the lavishness of Nature is in a measure responsible for this, and no doubt the readiness with which fortunes have been made among us has contributed to our extravagance.

Economy has a disagreeable sound in our ears. The impression prevails that it is synonymous with self-denial, but it simply means the frugal conduct of the home or business enterprise. It might be summed up as living within one's income, or, as a little Frenchwoman puts it, "Economy is ze best of everything for ze leastest monnaie." It is a relative term. What would be penuriousness in one person might in another be only good management of slender means.

"Comfort without waste" is the watchword in every well-ordered household, and the application of economy in the home requires intelligent thought. It is our duty to give it this, and should be so regarded. It is the little daily leaks that mount up so in course of time; scraps of bread thrown out, bits of butter, meat, cold vegetables, and, turning from the eatables, it is the "stitch in time" neglected, the hundred "loose screws" passing unnoted, which appreciably lessen the income.

Nor does economy signify scrimping. The person who scrimps wastes as much as is saved. Failure to provide good nourishing food, when able to afford it, is in reality an extravagance of the most reckless kind, for our bodily vigor, and mental power as well, is quick to feel the lack of proper sustenance. Scrimping makes of life a dreary routine, robbed of all attractiveness, for people who scrimp seem to think they must also limit the amount of enjoyment in the world. To be comfortable is a sin in their eyes.

Of the two evils, extravagance and scrimping, the last is certainly as deplorable as the first; with the one a fleeting pleasure is at least obtained, perhaps given, but the scrimper ministers neither to her own happiness nor to that of others. Scrimping undoubtedly deteriorates the character. All the finer attributes seem to wither under its influence. There can be no unstinted giving of love and praise and sympathy, no broad, compassionate outlook on the world's sins and sorrows in such a one. Not that economy quite implies elevation of the moral and spiritual nature, but whatever conduces to the well-being of the home lessens the avenues of temptation, and good housekeeping has far more to do with domestic peace than we take account of. There is a dignity in attention to the details of the home life which lifts it from out the commonplace, and blessed is she who, with good sense and judgment, "looketh well to the ways of her household."

MARY M. WILLARD.

SILK BISCUITS

Have you ever seen a biscuit-cushion? It is very handsome, and can be made from scraps of silk, velvet or cashmere, silk, of course, being by far the most effective. The biscuits may be any size you wish, but to be really pretty should not be too large. Cut a square of silk four inches in size, and a square of muslin three inches in size. Baste the silk on the lining, laying the surplus silk in the middle in a plait. Baste down three sides, stuff the biscuit with cotton, then plait and baste the fourth side. To make a cushion of nice size you will require at least forty-nine squares or biscuits.

If you wish to finish nicely, make a ruffle of broad ribbon, or with fancy stitch catch three narrow pieces of ribbon together and use for a ruffle; or make a double ruffle of silk, silkoline or sateen of some gay color, line with the same, and you have an elegant new cover for your old sofa-cushion.

Bed-spreads may be made following the same general design, but having the blocks larger. Make the lining four inches and the top six. Slumber-robes are very attractive made in the same style and finished with a ruffle of bright silkoline.

MARGARET M. MOORE.

DISPOSAL OF KITCHEN WASTE

Some people talk about the dispensations of Providence when afflicted with fevers or diphtheria; but a look about their back doors would indicate a possibility of more humble causes. If there is no drain to carry away the slops, do not throw them upon the ground in one place until the soil is blistered and sour and rank with disgusting odor. There are many plants for which soap-suds are beneficial—roses, cabbage, dahlias and cauliflowers, either ornamental or practical. Distribute the dish-water among them all. Any water containing salt is good for asparagus, quince or peach trees if not applied too liberally at one time. Mother used to say, "There is a hungry mouth for every crumb;" and through hot weather it seems as if there was a hungry leaf for every drop of water.

If there is no pig to eat up the peelings, then burn them in the kitchen stove; or if gasolene is used pile them in some corner of the garden, and with a little addition of paper and coal-oil have a little bonfire quite often. Do not litter up the back yard with trash to decay and be as disagreeable to the nostrils as to the eye.

GYP.

SUMMER BOARDERS

As the hot weather of summer comes on dwellers in cities long for the cooliug hreezes of the country. To furnish accomuodations for these, and at the same time fill their own pockets, many suumer hotels and boarding-houses have been built, the most of them heing well patronized. But there are many mothers with yonng children who wonld much prefer to spend the heated months in a qniet country farm-house where only a few boarders are taken, where there is no need of much dressing and the full value of country air and living could be had. I have known a few such ideal places where two or three mothers with their little ones went every summer, year after year, and came hack each fall rested and looking five years younger than when they went away. The children after such a summer are so brown and rosy that the farm-house would need no other recommendation than their chubby faces to prove it a veritable health resort.

It always seems to me that children who must live all their childhood years in a city are defranded, but if they can spend even a few weeks in the conntry in close contact with Mother Nature, with birds and flowers, hrooks and trees, not only will their health and strength be renewed, but their whole lives broadened.

Often on a farm where butter, eggs, chickens, miik, fruit and fresh vegetables are plentiful they cannot be readily turned into cash, and money is consequently scarce, especially during the time of the growing of the regular farm crops and before they are ready for market. At this time a few summer boarders will help consume the surplus and pay a good price for the privilege.

A few years ago a family came into possession of an old, worn-out farm. The house was large and rambling, hut in fairly good repair. The fences were nearly gone, and the fields grown up to weeds and bushes, but the natural advantages were good. Fields which had once been fertile could again be made to give abuudant harvests; wooded hillsides and a broad meadow through which flowed a never-failing brook, fed by springs, made a landscape fair to look upon. There was an old apple orchard which still bore some fruit, some old cherry-trees and grape-vines. These were trimmed and given good care. Small fruit, strawherries, raspberries, blackherries and currants were set out at once. This family had always lived in a city, bnt were delighted with this conntry home and willing to work to make their venture a success. The first summer they were on the farm a friend from the city visited them, and she it was who put summer boarders into their minds, and the next summer saw three mothers with their little children installed in the before unused rooms of the old house. Having lived so long in a city themselves they knew what city people want when they go to the country. Their tahle was always well supplied with fresh fruits and vegetables, chickens and eggs, sweet, crisp bacon or tender, juicy ham; rich milk, cream and golden butter were plentiful, with honey from their hives. Then there was delicious cold buttermilk, bonny clabber and cottage cheese, all home products. Occasionally a lamb furnished a change for the table, but no canned meat or fish were ever seen there.

There were wide old verandas and shady nooks where hammocks could be swung, and the little brook in plain sight from the house was a safe place for the little folks to wade and sail their boats; not deep enough in any place to be dangerous, it furnished never-ending delight to the children, and consequently rest to the mothers.

The doors and windows of the house were filled with wire screens so flies and mosquitoes, which so often make the snmmer boarder's life miserable, were banished. No carpets were on the floors, but comfortable beds, scrupulous cleanliness, a supply of fresh, cool water and clean towels were in the rooms.

The family rose early and breakfasted by themselves, but dinners and suppers were taken together. A stout, gentle old horse and roomy carry-all were at the service of the boarders, and often with well-filled baskets they would go for a picnic in the woods, and the family could have a quiet day by themselves with no big dinner to get. It was a change enjoyed by all.

Last summer a unique summer-house was put on the lawn. A large old tree began to show such signs of decay that it was cut down. The top of the stump was sawed off at a convenient height for a seat, and in the hollow center of the stump a post was set, to which was fastened a large old umbrella such as teamsters use on their wagons. From the edge of the umbrella strings were stretched to the ground, slanting outward, and vines planted, which climbed up the strings and covered the top of the umbrella. Space was left between the vines on one side for a doorway.

Summer after summer the same families have found their way to this quiet country home, which has nothing of the boarding-house about it, and the money left there each summer has enahled the owner to pnt the farm in finest condition, repair and refurnish the honse, and add many a comfort and luxury which wonld otherwise have been heyond their reach. The children have been

edncated, a piano, hooks and magazines are at hantl; in fact, an ideal country home has been made, and the summer boarders have helped to this result.

MAIDA MCL.

LIVING WITH OTHER PEOPLE

I used to think it so strange when a child that the dear old sexton of our church, who was a great lover of little children, so often had the same answer ready when you asked him if he knew such a person. His reply was, "I don't know them."

"Yes, you do know them. You visit them. Besides, you know nearly every one around here," we would say.

He would look very wise and answer, "Child, you never know people until you live with them. I never lived with them."

Since I have grown up, and have learned the true purport of the kind old sexton's words, I agree with him. We may think we know people very well, meeting them often nnder different circumstances, hut let us happen to live together; then we find out that we did not know each other. It may be that we find them nobler, more self-sacrificing, and having traits that raise them much higher in our estimation. On the other hand, the disagreeahle idiosyncrasies creep out often, and traits that you never dreamed of them having confront yon—traits that make it impossible for them to live with other people harmoniously.

An eloquent lecturer npon this subject said that parents ought to begin in childhood to instill principles and teach them habits that will make it possible for them to live in other people's houses.

A charming couple had much trouble in securing board in the varions delightful homes surrounding them, which puzzled their friends. Finally it was explained that the tronble lay in people not wanting to take their daughter, fifteen years of age. A lady noted for her amiable disposition, and very popular with her hoarders, said she believed she could live with anyhody, and took the family to board. She finally said, "No one can live with that poor girl but her parents." The servants left on her account, and the hoarders were getting ready to do so, when the parents saw the trouble and kindly went to housekeeping. They acknowledged that she was beyoud their control.

Ah, the pity of it!

A lovely aunt took her brother's three orphan children to rear. They had been indulged and their wants aud wishes were paramount. They had been considered before others, and the consequence was their aunt's two daughters (whom she was hriuging up in the same way) saw the utter selfishness and disregard of their young cousins for the wishes of their father and mother. The eldest daughter (fifteen years—the same age as the eldest cousin) came to her mother one day with tears in her eyes, and said, pathetically, "Mother, if you and father shonld die, like uncle and aunt have, and leave sister and I to live with other people, we would make them as miserable as the consins have us. I'm going to turn over a new leaf. I'm going to think of others besides myself, and try to teach little sister to be good and thoughtful." And her influence from that time on worked a reformation in that house and it became a happier honsehold. How quickly the poor little children fonnd ont that their domineering, selfish, spoiled ways made it impossible for them to live happily in other people's homes.

It is a subject for a wide range of thought. Only recently I heard a little school-girl say, "I'm rooming with Gracie Black. Every one of the girls wanted to room with her; she is so lovely and everyhody gets along with her."

Who can measure the influence of one such girl or woman; who makes up her mind to see the hrignt side of people and circumstances, to he slow to find fault and complain, always watchful for opportunities of giving pleasnre or to comfort some one, to say a kind word to the new shy scholar, to show thought and consideration to the elderly, to lend a helping hand to a tired, overworked servant? Such people are delightful to live with, and we do not appreciate them enough, I fear.

Did you ever notice that the people whose cheerfulness and sweet temper are most remarked upon are often the ones who have the best reasons for repining or being depressed and morbid over their conditions? Instead, however, they have turned bravely and tenderly to the needs of others. Some day we hear incidentally what trouhles they have had, and they seem so much greater than ours that it seems selfish in us to have poured out our griefs into their willing ears. But who has not some burden to carry, some struggle to make? And how sweet and comforting in life's pilgrimage to meet such courage and faith and gladness to help us on our way!

Let us strive to cultivate this virtue of living with other people, remembering that every human soul which meets misfortune nobly confers a direct benefit upon the human race. We should not shrink from meeting people, especially strangers, and feel that we owe nothing to outsiders, that we are not our brother's keeper.

"If we sit down at set of sun,
And count the things that we have done,
  And, counting, find
One self-denying act, one word,
That eased the heart of him who heard,
  One glance most kind,
That felt like sunshine where it went,
Then we may connt the day well spent.

"Bnt if, through all the livelong day,
We've eased no heart by yea or nay;
  If, through it all,
We've nothing done that we can trace
That bronght the sunshine to a face,
  No act most small
That helped some soul, and nothing cost,
Then count that day as worse than lost."

SARA H. HENTON.

A WORD TO THE WISE

Just now, when so many tired housekeepers are striving to reconcile "summer work" with at least a degree of summer rest, it may not be out of place to offer a snggestion in regard to fruit-canning, jelly-making, pickling and the like. The suggestion in snbstance is just this: Don't do it any longer, or at least make the experiment of dropping it for one season and note the result. Cans and jars will be empty, it is true, hut the relief gained will be unspeakable. Eat the fresh fruit—each kind in its season—as long as it lasts, and you will find that, except for short intervals, it is to be had the year round. Then the dried fruits are so healthful and abundant one need never go fruitless, though the beautiful summer days be spent either in rest or in some more congenial employment than that of filling innumerable cans, while immured in a kitchen perhaps rivaling in temperature the "Black hole of Calcntta."

It is so easy to stay in a rut, especially one which has been patiently traveled since our foremothers landed upon Plymouth Rock; but it must not be forgotten that in the far-away past in which they preserved and pickled, spun and wove, the facilities for obtaining things to eat, drink and wear at short notice were extremely limited, even if any existed. What a strnggle it must have been for our poor great-grandmothers to provide with their own hands everything used for the comfort of their households! It is said that we American people have not yet recovered physically from this strain upon our ancestors. It remains now for us to institute an entirely new order of things—to resolutely school ourselves to avoid the unnecessary hardships of housekeeping, and do without those things which do not pay for the time, strength and personal comfort sacrificed in obtaining them.

We are forced to admit that this, like other good advice, cannot be made equally useful to all. The difference between living in town and in the country makes work that in one place may be avoided, often a necessity in another. Yet even in the country where one's own orchard is relied upon to furnish the winter's store of fruit for the household, at least half the time and labor spent in its preparation may be saved by canning or preserving half as much.

In the average country home an appetite for sweets is fostered by the plentiful supply with which the housewife loads her shelves, while excessive indulgence in the same creates distaste for more nutritious food and ministers in no way to the physical well-heing of her family. It is five years since, by the kind persuasions of a wise friend, I was brought to see the error of my own ways, and to resolve that for all future time I would ahjure the annual siege of putting up fruit. For a long period thereafter my shortcomings in this respect were ahly discussed and criticized by my female relations—all good housekeepers, born and hred in thrifty New England ways. The familiar lines wherein the grasshopper is made to suffer for his idleness and the ant is rewarded for her industry were repeatedly quoted to me, while even Solomon's proverh, "Go to the ant, thou sluggard," and the rest of it, was drummed into service and aired for my benefit.

All this in fun, of course, but with just flavor euough of "earnest" in it to be detected. Never mind. No one knows that it was detected, and I go on my way rejoicing in the freedom from work and worry, in the vitality and strength I have been enahled to turn into new channels of usefulness, while I realize forcibly that the worst bngbear of summer honsekeeping has heen vanquished.

How many of those who read this will join the army—not a large one, by the way—of summer shirks? Don't take pattern from the eels and the foxes:

"Much delighted were they,
But preferred the old way."

LILLA A. WHITNEY.

RUGS AND CENTERPIECES

Now that hard-wood floors have become so common, and so deservedly popular, rugs and centerpieces have become almost a necessity, and the making of them is a suhject of interest to every housewife. Of course, it is very nice, if one is able, to buy the handsome and expensive rugs that are always for sale in the stores; but they are not always within our means, and very handsome ones may be made at home with but little time or expense, and at the same time the cast-off garments that always so accumulate in every household may he used to good advantage.

A rug or centerpiece to serve a useful purpose should be heavy, thick and substantial—one that will uot seem to take a satanic delight in winding itself about one's feet on the slightest provocation. Such a rug once caused a frieud of mine to stumble and fall, thereby making a cripple of her for life; and I regret to say that such a rug will often cause the men and boys of the family to use language that they certainly never learned in Sunday-school.

I want to tell how to make a handsome and serviceahle centerpiece, that will he a thing of beauty and a joy—well, almost forever. For material use any wool goods that would be suitable for a rag carpet—old underwear, stockings, and even men's wear that is not too thick aud heavy. Cut the pieces an inch wide if the goods are thick, and an inch and a half wide if thin. Gather the strips lengthwise on stont twine, with a hack-stitch at every added piece, to keep them from pulling apart when being woven. Gather about as full as a common ruffle, and wind in balls. It is woven in a common carpet-loom. Use dark warp and have the weaver leave out every other thread of warp and weave in a thread of common carpet-rags between every gathered strip. The breadths may be sewed together for a centerpiece, or the goods may be woven in common rug lengths.

The center of the rug may be made hit or miss, and a little pale blue and cream color mixed in makes it very pretty. There may be a shaded order of red across each end, and the ends should be finished with fringe, but be sure to get the short wool fringe that will lay out smoothly on the floor.

You will be surprised how quickly such a rug can be made, and I am sure you will be pleased with the result of your lahor.

MRS. CLARKE HARDY.

OUR SUNDAY AFTERNOON

THE PATH ACROSS THE FIELD

Around me was the beauty
Which only summer yields,
The shadow of the woodland,
The bounty of the fields,
The gleam of shining waters,
The murmur of the sea—
The varied book of Nature
All opened wide for me!

Amid these scenes of beauty
I spied a pathway there,
All flowerless and dusty,
All hard and brown and bare;
No dainty gown swept over,
No foot in dalliance strayed
Along the narrow limit
The tread of Toil had made.

But weary men and women
At morn and eve did pass
Beside the way unshaded,
Amid the sunburnt grass.
Their step was slow and heavy,
Their garments bore the soil
Of the hard world's grim work-day—
They walked the way of Toil.

So close against our pleasure
Is the undertone of care,
Of those who, unsheltered,
The heat and burden bare.
And the fair summer memory
Sweet harvest to me yields;
Yet ever lives the picture
Of the path across the fields!

—Lucy Randolph Fleming, in Harper's Bazar.

THE KEY

In worlds unseen, about us and above,
The cherubim are singing God's own song.
Write all life's music in the key of love,
And you will chord with that harmonious throng.

—Ella Wheeler Wilcox, in The Christian Endeavor World.

WORRY AND ITS CURE

WORRY must not be confused with anxiety, though both words agree in meaning, originally, a "choking," or a "strangling," referring, of course, to the throttling effect upon individual activity. Anxiety faces large issues of life seriously, calmly, with dignity. Anxiety always suggests hopeful possibility; it is active in being ready, and devising measures to meet the outcome. Worry is not large, individual sorrow; it is a colony of petty, vague, insignificant, restless imps of fear, that become important only from their combination, their constancy, their iteration.

When death comes, when the one we love has passed from us, and the silence and the loneliness and the emptiness of all things make us stare dry-eyed into the future, we give ourselves up, for a time, to the agony of isolation. This is not a petty world we must kill ere it kills us. This is the awful majesty of sorrow that mercifully benumbs us, though it may later become, in the mysterious working of omnipotence, a rebaptism and a regeneration. It is the worry habit, the magnifying of petty sorrows to eclipse the sun of happiness, against which I here make protest.

To cure worry the individual must be his own physician; he must give the case heroic treatment. He must realize with every fiber of his being the utter, absolute uselessness of worry. He must not think this is commonplace—a bit of mere theory; it is a reality that he must translate for himself from mere words to a real, living fact. He must understand that if he spends a whole series of eternities in worry it would not change the fact one jot or tittle. It is time for action, not worry, because worry paralyzes thought and action, too. If you set down a column of figures in addition no amount of worry can change the sum total of those figures. That result is wrapped up in the inevitability of mathematics. The result can be made different only by changing the figures.

The one time that a man cannot afford to worry is when he does worry. Then he is facing, or imagines he is, a critical turn in affairs. This is the time when he needs one hundred per cent of his mental energy to make his plans quickly, to see what is his wisest decision, to keep a clear eye on the sky and on his course, and a firm hand on the helm until he has weathered the storm.

There are two reasons why man should not worry, either one of which must operate in every instance. First, because he cannot prevent the results he fears. Second, because he can prevent them. If he is powerless to avert the blow he needs perfect mental concentration to meet it bravely, to lighten its force, to get what salvage he can from the wreck, to sustain his strength at this time when be must plan a new future. If he can prevent the evil he fears, then he has no need to worry.

If man does, day by day, ever the best he can by the light he has, he has no need to fear, no need to regret, no need to worry. No agony of worry would do aught to help him. Neither mortal nor angel can do more than his best. If we look back upon our past life we will see how, in the marvelous working of events, the cities of our greatest happiness and of our fullest success have been built along the river of our deepest sorrows, our most abject failures. We then realize that our present happiness or success would have been impossible had it not been for some terrible affliction or loss in the past—some wondrous potent force in the evolution of our character or our fortune. This should be a wondrous stimulus to us in bearing the trials and sorrows of life.

To cure one's self of worry is not an easy task; it is not to be removed in two or three applications of the quack medicine of any cheap philosophy, but it requires only clear, simple, common sense applied to the business of life. Man has no right to waste his own energies, to weaken his own powers and influence, for he has inalienable duties to himself, to his family, to society and to the world.—Saturday Evening Post.

MARRIAGE MAXIMS

Never marry except for love.
Never taunt with a past mistake.
Never allow a request to be repeated.
Never meet without a loving welcome.
Never both be angry at the same time.
Never forget to let self-denial be the daily aim and practice of each.
Never let the sun go down upon any anger or grievance.
Never neglect one another; rather neglect the whole world besides.
Never make a remark at the expense of the other—it is meanness.
Never be "stubborn," but let each strive to yield oftenest to the wishes of the other.
Never part for a day without loving words to think of during absence.
Never find fault unless it is perfectly certain that a fault has been committed, and always speak lovingly.
Never let any fault you have committed go by until you have frankly confessed it and asked forgiveness.
Never forget that the nearest approach to perfect domestic happiness on earth is the cultivation, on both sides, of absolute unselfishness.

THOUGHT JEWELS

Some say that the age of chivalry is past. The age of chivalry is never past so long as we have faith enough to say, God will help me to redress that wrong; or if not me, he will help those that come after me, for his eternal will is to overcome evil with good.—Charles Kingsley.

How can the sense that the living God is near to our life, that he is interested in it and willing to help it, survive in us if our life be full of petty things? Absorption in trifles, attention only to the meaner aspects of life, is killing more faith than is killed by aggressive unbelief.—George Adam Smith.

The pulpit is just as much needed as ever. But it has to do its work in a less attentive environment, and it now needs a keener stroke, a deeper penetration into the actual conditions of life and a more courageous resolve to magnify its office, not by pompous dignity nor by frothy sensationalism, but by vigorous, manly service to the spiritual necessities of the age.—Rev. Dr. Henry van Dyke.

God is a kind Father. He sets us all in the places where he wishes us to be employed; and that employment is truly "our Father's business." He chooses work for every creature which will be delightful to them, if they do it simply and humbly. He gives us always strength enough for what he wants us to do; and we may always be sure, whatever we are doing, that we cannot be pleasing him if we are not happy ourselves.—John Ruskin.

Why make we moan
For loss that doth enrich us yet
With upward yearnings of regret?
Bleaker than unmossed stone
Our lives were but for this immortal gain
Of unstilled longing and inspiring pain!
As thrills of long-hushed tone
Live in the viol, so our souls grow fine
With keen vibrations from the touch divine
Of noble natures gone.

—Lowell.

Almighty! Listen! I am dust.
Yet spirit am I, so I trust.
Let come what may of life or death,
I trust thee with my sinking breath.
I trust thee, though I see thee not
In heaven or earth or any spot.
I trust thee till I shall know why
There's one to live and one to die.
I trust thee till thyself shall prove
Thee Lord of life and death and love.

—Elizabeth Stuart Phelps.

GETTING GOOD SLEEP

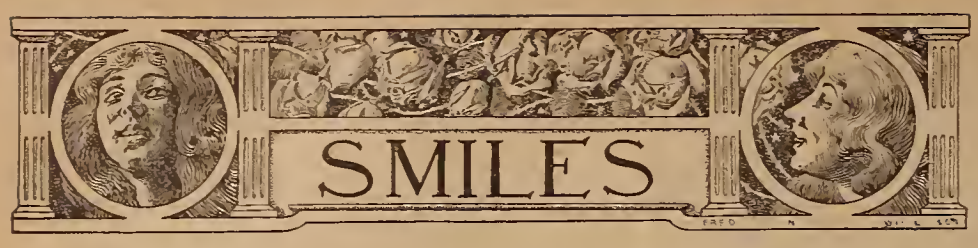
Too much cannot be said, nor can the utterance be made too earnest, regarding the importance of good sleep as a restorer and an invigorator of tired nature. Mental, moral and physical welfare depends largely upon sound, refreshing sleep. If the brain or the arm or the foot is weary, suffering from overexertion, nature gives her best service in the way of repair while the subject sleeps—and without sleep the recuperative process cannot be carried on, so far as the brain and the vital forces are concerned. How then shall we secure the coveted boon of sound and health-giving sleep? There have been many dissertations on the subject, some of which have been informed with wisdom, while others have lacked that very essential quality. But the following from an eminent physician may profitably be read and heeded by those who need instruction in this regard: A light supper just before retiring is usually of advantage. Babies and brute animals are usually somnolent when their stomachs are well supplied with food, the activity of the stomach withdrawing the excess of blood from the brain, where it is not needed during sleep. On the other hand, people who are very hungry usually find it very difficult to sleep. And then a habit of sleep at a regulated time and during proper hours should be cultivated in case this habit has been lost. In accomplishing this the attainment of a favorable state of mind is of great importance. Sleep cannot be enforced by a direct exercise of the will. The very effort of the will to command sleep is enough to render its attainment ineffectual. The mental state to be encouraged is one of quiescence, one of indifference, a feeling that the recumbent posture is a proper one for rest, and that if the thoughts are disposed to continue active they may be safely allowed to take their course without any effort toward control. This state of mind and thought is next akin to dreams, and dreaming is next akin to sound sleep. A number of mental methods have been advised and put in practice for the purpose of securing sleep, the design being to turn the thoughts from objects of interest to a condition of monotony, as by mentally repeating well-remembered phrases or sentences, or by counting. But the state of indifference, if this can be obtained, is likely to be the most efficient as being the least active.

HE HAS GONE THIS WAY

Oh, when we are journeying through the murky night and the dark woods of affliction and sorrow, it is something to find here and there a spray broken, or a leafy stem bent down with the tread of His foot and the brush of His hand as He passed; and to remember that the path He hath trod He has hallowed, and thus to find lingering fragrance and hidden strength in the remembrance of Him as "in all points tempted like as we are," bearing grief for us, bearing grief with us, bearing grief like us.—Alexander McLaren.

DUTY AND TRUST

The one thing that brings comfort to a man's heart is to know that he is on the path of duty where God put him, and that if danger, and peril, and scorn, meet him there, God, who sent him, must take the responsibility. When God sends his servants upon his errands he takes all risks; and when you are doing God's work, when you are on God's track, and know that you are pursuing God's plan, his course across the ocean—then let the storm come; God is responsible for carrying you there, and you may sleep in the midst of it.—F. B. Meyer.



NEW NATIONAL HYMN

My country, 'tis of thee,
Sweet land of pensions fee—
  Of thee I sing!
Land where war told the tale;
Land where the beef was stale;
Land where the war-generals rail
  Like anything!

Oh, hear me rise and shout:
"Thank heaven, I'm mustered out!"
  (That's what I sing!)
Fighting on sea and shore
Ever for me is o'er;
Bullets and beef no more!—
  (That's what I sing!)

—Frank L. Stanton, in Atlanta Constitution.

TWO IMMIGRANTS

A KEEN-WITTED fellow, despite his general ignorance, was brought down to the court-house to receive the rights of citizenship.

"Name the capital of the nation," said the judge.

The applicant scratched his head.

"I can't just place it, judge," he said; "but you name over a few of the towns, and I'll tell you when you strike it."

"Is it Chicago?" asked the judge.

"No."

"Is it St. Louis?"

"No."

"Is it Indiana?"

"No."

"Is it Arizona?"

"No."

"Is it Washington?"

The candidate looked puzzled; he hesitated.

"Say, judge," he slowly replied, "if that ain't th' place it's a dum close shot."

He got his papers.

Another candidate was brought in by a well-known local politician.

"Let me see what you know about geography," said the judge. "Supposing you and Mr. Blank walked straight down to the lake and started across it, going due north, where would you land?"

"On the bottom," said the candidate, promptly.

He got his papers, too.—Cleveland Plain Dealer.

MARRYING A MAN

It was in a Duluth court, and the witness was a Swede, who was perhaps not so stupid as he seemed to be.

The cross-examining attorney was a smart young man, whose object was to disconcert the witness and discredit his testimony.

"What did you say your name was?" was the first question.

"Yahn"—very deliberately—"Peterson."

"John Peterson, eh? Old man Peter's son, I suppose. Well, John, where do you live?"

"Where Ah live? In Duluth."

"Now, Peterson, answer this question carefully. Are you a married man?"

"Ah tank so. Ah was married."

"So you think because you got married you are a married man, do you? That's funny. Now tell the gentlemen of this exceptionally intelligent jury who you married."

"Who Ah married? Ah married a woman."

"See here, sir! Don't you know any better than to trifle with this court? What do you mean, sir? You married a woman? Of course you married a woman. Did you ever hear of any one marrying a man?"

"Yes, mah sister did."—Life.

PARAGRAPH POINTERS FOR PROGRESSIVE PARENTS

If a boy.

1. Don't talk about the foot-ball nine. You show your ignorance and incur your boy's disdain. Better ask him if his allowance is large enough.

2. Never ask your son who the valedictorian is in his class. You may interrupt some valuable foot-ball information; and the chances are that he doesn't know, anyway.

3. On no account mention the subject of examinations. Even if he hasn't passed them all, be thankful he isn't dropped. If he has passed all, you may be sure he'll mention it.

4. Don't offer your son's friend a cigar; he'll take one anyway. Have the weeds set out in handfuls, not in the box. He'll take fewer.

5. Never tell your son that his friend seemed an intelligent fellow. Call him "great boy," and say that you "bet he knows a thing or two!"

6. Should a few of your son's "little" accounts be presented to you, make no comment. Pay them promptly and look happy. A college education costs something. It is also poor taste to inquire after the gold watch which was his birthday present. You will be privileged to get that out later.

7. At the end of the vacation give your boy no advice for the coming term. Give him a check instead. He'll remember it longer.

If a girl.

1. Don't talk at all. She'll do it all; and more, too. You will find the two principal subjects to be dress and culture. I wouldn't attempt the latter. Let the mother fight it out along the line of the former.

2. Never ask your daughter who the most popular girl in college is, because she probably hates her. Ask who the brainy one is. You see, the brainy kind are safe with men around.

3. On no account mention domestic happenings. If you have a new cook, or your maid has eloped with the iceman, you only mildly interest the college girl. Talk the Greek drama, or how Milly Howard has thrown down Fred Jenkins.

4. Don't smoke when your daughter has a college friend in the house. Instead, call for a Chopin sonata after dinner, if you hear she's musical. If she isn't, be thankful, and chew preserved ginger.

5. Never style your girl's friend "pretty," or a "nice little thing." Say that she "impressed you as possessing tremendous reserve force."

6. Should the bills, resulting from your daughter's vacation exploits in shopping, reach you at the breakfast-table, don't open them. When you get where you can express yourself in untrammeled figures of speech, you may comment. You will pay them promptly, after reflecting that she has your wife's backing. Also, never ask her if they're "right." Just pay them.

7. Let your wife give all the advice when your girl leaves for college. The best you can do is to buy the ticket and a box of caramels. Don't venture on chewing-gum unless you are certain what flavor she likes.—Larkin G. Mead, in Puck.

REMEMBERING THE SABBATH

"Had it no been the Sabbath day," said a Perthshire preacher to an elder, "between the preachin's," "I wonld just have asked ye how the hay was selling in Perth on Friday."

"Well, sir," replied the elder, "had it no been the day it is I wad jest hae tell it ye it was guan at a shilling the stane."

"Indeed! Well, had it been Monday instead of the Sabbath I would have told you I have some to sell."

"Umph, ay, ou ay, sir. And had it been Monday, as you say, then I wad just hae tell it ye I wad gie ye the market price for it."

The elder's carts were at the manse early on Monday morning, and the preacher's haystack vanished like a highland mist.

LITTLE BITS

"Well, I ought to know my own mind!"

"Certainly! You try to have it different from anybody else's."—Detroit Journal.

"I think I know now," said the soldier, who was making a determined effort to masticate his first ration of army beef, "what people mean when they talk about the sinews of war."

Teacher (to class)—"What is a good definition of the word 'lie?'"

Bright boy—"A lie is an abomination to the Lord, and a very present help in time of trouble."

Sunday-school teacher—"What is the lesson we are to draw from this war with Spain?"

Little Willy Wickiemeyer—"There ain't no lessou in it fer us. We're teachin' Spain a lesson."—Cleveland Leader.

A New York woman became delirious while looking in the windows of millinery-stores. If you are a close observer of such things you may have noticed that a display window will turn any passing woman's head.—Denver Post.

"Oh, Harry, listen to this: In Siberia they chain convicts to their wheelbarrows."

"Well, Harriet, you know very well you'd chain me to the lawn-mower if you weren't afraid the neighbors would blow about it."—Daily Record.

Japly—"I wouldn't mind getting drunk occasionally but for one thing."

Yaply—"What is that?"

Japly—"It always gives me the courage to call on the very people that I don't want to have see me in that condition."—Town Topics.

She—"A doctor in Berlin, after a great deal of study, has discovered that married men live longer than bachelors!"

He (imploringly)—"Save my life!"

She (joyously)—"Oh, Clarence, how did you guess that I loved you!"—Ohio State Journal.

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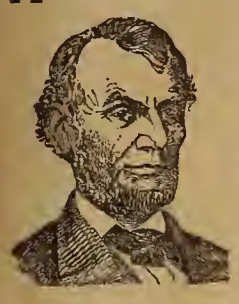

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No. 952. By Shirley Dare, the most famous American writer on subjects pertaining to ladies' toilet. This is a splendid book for girls and women. Gives honest and valuable instructions about making the toilet, keeping healthy, young aud beautiful, etc.

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No. 999. By Jerome K. Jerome. For that common but extremely unpleasant complaint, "the blues," this book is a pleasant and effective cure. Mr. Jerome is sometimes called the "English Mark Twain," and is certainly one of the best living writers of pure, wholesome fun. There is not a dull line in the book. Every paragraph is scintillating with flashes of brilliant wit. Who has not, at some time or another, had "the blues," or been "hard up?" Who has not been in "love?" For a royal treat read the author's thoughts on these and numerous other subjects. The "thoughts" which fill a book may be "idle," as the author terms them, but they certainly emanate from a busy brain.

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She went to the barber's,
To get him a wig,
And when she came back
He was dancing a jig.

There are seven more pictures and fourteen verses similar to the above to the story of "Old Mother Hubbard." The book contains one hundred and thirty-nine stories and over seventy pictures and illustrations. This is one of the best books for children in the entire list.

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No. 973. These fables were written during the glory of the Greeks, and though old, they are even more popular to-day than ever before. Many of the wise sayings that are repeated on all occasions are from these fables, yet not one out of a thousand know who first wrote them, as "He killed the goose that lays the golden eggs." Æsopus was a slave, but by his motber-wit gained fame that will endure as long as any of the "Seven Wise Men of Greece." But the great beauty of these fables lies in the fact that they are so very simple that all children will read them with delight, all the time unconsciously learning the greatest and best lessons of an upright, unselfish life. Every person should have a copy of "Æsop's Fables." There are about 200 of the best fables given in this book, with forty-nine illustrations and six pages devoted to the life and times of Æsopus.

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No. 958. By R. L. Stevenson. When an author's works live after him, they are, as a rule, worth reading. The stories by Stevenson have stood this test, and are now widely read. "The Merry Men" is a story that you will not forget soon after reading it.

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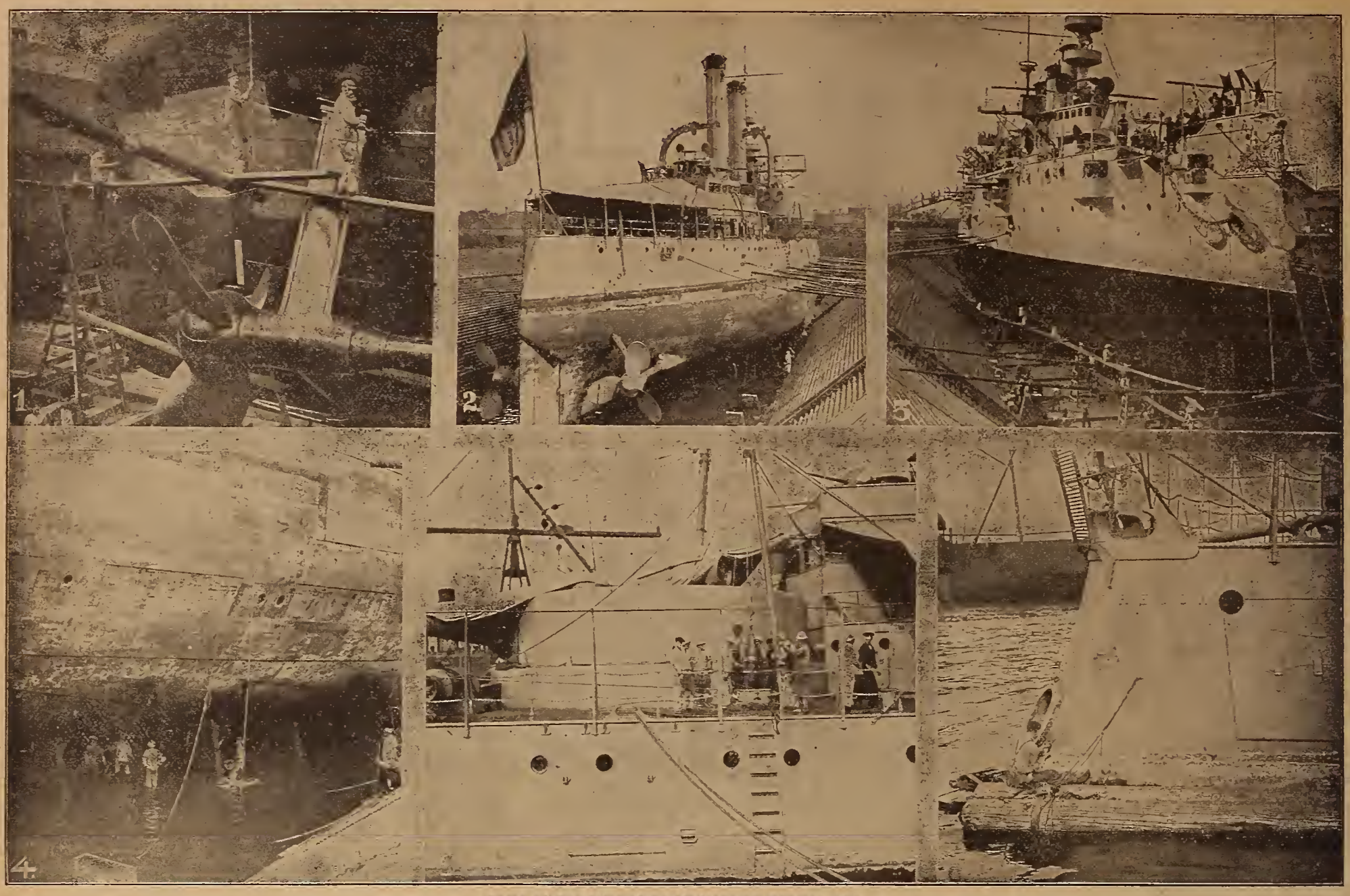

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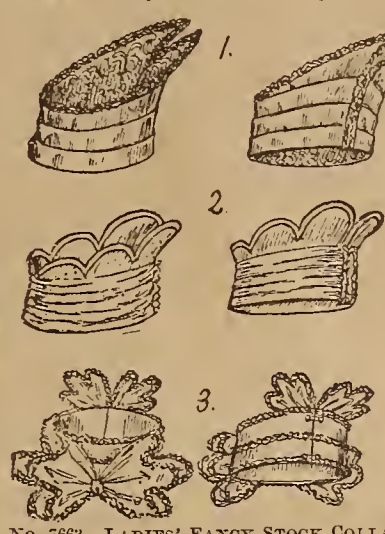

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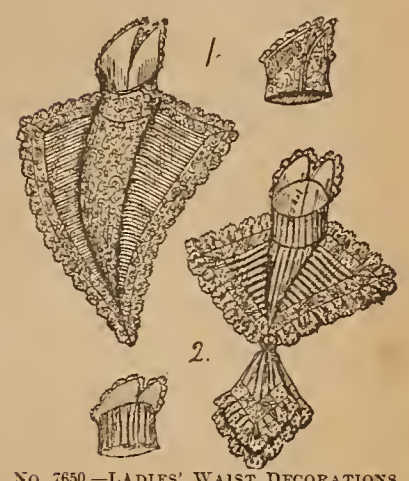

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SELECTIONS

THE STETHOSCOPE

THE possibility of associating the varying chest sounds with diseased conditions of the organs within appealed to the fertile mind of Laenuec as opening new vistas in therapeutics, which he determined to euter to the fullest extent practicable. His connection with the hospitals of Paris gave him full opportunity in this direction, and his labors of the next few years served not merely to establish the value of the new method as an aid to diagnosis, but laid the foundation also for the science of morbid anatomy. In 1819 Laennec published the results of his labors in a work called "Traite d'Auscultation Mediate," a work which forms one of the landmarks of scientific medicine. By mediate auscultation is meant, of course, the interrogation of the chest with the aid of a little instrument which its originator thought hardly worth naming until various barbarous appellations were applied to it by others, after which Laennec decided to call it the stethoscope, a name which it has ever since retained.

In subsequent years the form of the stethoscope, as usually employed, was modified and its value augmented by a binauricular attachment, and in very recent years a further improvement has been made through application of the principle of the telephone, but the essentials of auscultation with the stethoscope were established in much detail by Laennec, and the honor must always be his of thus taking one of the longest single steps by which practical medicine has in our century acquired the right to be considered a rational science. Laennec's efforts cost him his life, for he died in 1826 of a lung disease acquired in the course of his hospital practice, but even before this his fame was universal, and the value of his method had been recognized all over the world. Not long after, in 1828, yet another French physician, Piorry, perfected the method of percussion by introducing the custom of tapping, not the chest directly, but the finger or a small metal or hard rubber plate held against the chest—mediate percussion, in short.—Harper's Magazine for June.

AN ADVANTAGE

Nothing within the past year or two has directed more attention the world over to the capacity for rapid and good work in American engineering establishments than the recent award of the contract for a bridge over the Atbara river, a tributary to the Nile, in the Soudan, to an American firm of bridge-builders. The bridge was needed most urgently for railroad use in connection with Sir Herbert Kitchener's famous military operations—indeed, time was of the greatest importance, and in this respect the American builders distanced all other bidders, guaranteeing to deliver the whole bridge of seven spans in seven weeks, while the earliest delivery that could be obtained from any of the British firms was for two of the spans in six months.

Why American builders should in this instance have led the world and have crowded British firms out of a territory which they might well have considered peculiarly their own, is an interesting question. Improvements in methods, the introduction of time and labor saving devices, with the incidental reduction of costs, furnish a ready answer, and it is particularly interesting to note that as not the least of these improvements electrical conveniences have been cited. Electrically driven shop-tools, heavy ones as well as light ones, have eliminated many difficulties of operation, and electric cranes have greatly simplified the handling of heavy pieces. The principle of portability in the tools, moreover, has been applied to the widest possible extent, and in itself has contributed almost as much as any other thing to that rapidity and excellence of output for which American shops have become noted.—Cassier's Magazine for June.

WAY OF MEASURING THE HEIGHT OF A TREE

There is a story that during the war there was a river to be bridged and the engineers spent the night making plans. When they went out in the morning after their night of hard work they found that the river had already been bridged. Some practical farmers among the soldiers had laid the plans and turned an army into workmen.

Carpenters and woodsmen do not know a single principle of trigonometry, but they solve by simple means some of the problems which come up in their daily life. They may not be accurate to a hair's breadth, but they answer the purpose.

Supposing a wood-chopper in the Maine forest is told to get out a mast for a yacht. He knows that he must find a tree which is straight for sixty feet below the branches. It would be very troublesome to climb trees and measure them with a tape measure, so he without knowing it, uses practical trigonometry.

He measures off sixty feet in a straight line from the tree, and then he cuts a pole which when upright in the ground is exactly as tall as himself. This he plants in the earth his own length from the end of his sixty feet.

For example, if he is six feet tall he plants his six-foot pole perpendicularly fifty-four feet from the tree. Then he lies down (on his back) with his head at the end of the line, and his feet touching the bottom of the pole, and sights over the top of it. He knows that where his eyes touch the tree it is almost exactly sixty feet from the ground.

NOT MONEY-SAVERS

No Jew to-day in America has a fortune of the first class. In a list of the fifty richest men in the country there is no Jewish name. If such a list were extended to one hundred, there would be none. The Jews are great traders, no doubt, but the Scotch, the Scotch-Irish, the French, the Dutch and the pure Yankee can beat them hollow when trading is done on a large scale requiring executive ability, courage and absolute confidence in the integrity of the merchant. No doubt the Jews make a great deal of money, but they are speculators and gamblers and what they make is not always held securely. Then, again, they do not, or rather they have not in the past generally begun with capital secured by inheritance. Nor have they until lately invested in land. They are also Oriental in their taste and spend with much liberality to themselves in their living.

A Jew, when profits accrue to him, is usually very generous to himself and to all that belongs to him. And many generally belong to him, for the Jews are noted for their large families. They are money-makers, but not money-savers. Every man who reads this statement will have knowledge of an individual Jew to confute it. I am not speaking of an exceptional individual here and there, but am making a general statement. However, I repeat in entire confidence, there is to-day in America no individual Jew so exceptionally rich that he can rank in wealth with the fifty or one hundred men who stand at the top.—John Gilmer Speed, in Ainslee's for June.

WHEN MARS CAME OUR WAY

"In 1877 Mars was at his nearest to us; near, that is, from an astronomer's point of view, though really at the enormous distance of thirty-five million miles," says Mabel Loomis Todd, in the "St. Nicholas." "Yet a great deal was learned about this neighbor in the sky, among other things, that he is attended by two tiny satellites, or moons, never seen before."

Other things have been learned about Mars: "For instance, we feel quite sure now that Mars has an atmosphere, though not more than half as dense as our own, but far better than none, as we can tell by looking at our bright though dead and desolate moon, from which air and water have long since disappeared. And if Mars has air, the polar caps alone would seem to show that he has also ice and snow; and there appear to be, as well, areas of water or marsh, though less in extent than the land. The northern hemisphere looks brighter through the telescope, even showing tints of red and yellow, which astronomers are inclined to think are chiefly dry land, probably desert; while the southern is dark, the 'seas' brown or dull gray, quite as water might appear. These spots were first called seas, like the smooth regions of the moon, and the name continues in both, whatever they may be."

THE LARGEST FLOWER IN THE WORLD

The largest flower in the world, it is said, is the bolo, which grows on the island of Mindanao, one of the Philippine group. It has five petals measuring nearly a yard in width, and a single flower has been known to weigh as much as twenty-two pounds. It grows on the highest pinnacle of the land, about two thousand feet above the level of the sea.

FARM AND FIRESIDE.

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THE FARMER OF HOLLAND

BY EDWARD A. STEINER

EVEN a short trip through Holland leaves indelible impressions. Its red-tiled houses peeping from behind the dikes—Holland's fortresses against the sea—its thousands of canals filled by moving sail-boats, its countless windmills fanned by the air, its quaint church-towers, its picturesque peasantry, its mellow sky, its huge cheeses—who can ever forget these things?

The glimpse of Leyden, where they starved themselves rather than surrender to the Spanish, and where they chose a university rather than freedom from taxation, and where our forefathers learned lessons of religious liberty; a few hours at Delft, where they have painted the town red and the china blue; a day in Amsterdam, the northern Venice, where they polish diamonds; a glimpse of Schiedam, where they make two hundred varieties of liquors; and bits of glimpses of Edam, Maasdam, and all the other blessed places with cursed Dutch eyes, what a delight they all were to the eye! Clean, scrupulously clean, the cities and villages always look, like chubby, rosy-cheeked babies after their bath.

Twice a week city and country alike clean house; outside and inside, doors, windows, walls, porcelains, furniture, parlor and stable are cleaned. You can see the women, short-skirted, white-capped, wooden-shoed, climbing onto window-sills, sponge in hand, polishing windows, down on the floor scrubbing, or hose in hand squirting the water up to the chimneys, polishing brass door-knobs; well, in a word, "they all have a fury of cleanliness," and I pity the men who have to endure house-cleaning twice a week.

But what strikes the agricultural beholder with still greater wonder than this battle with dirt is the constant battle with the sea, the rivers and the lakes. Holland is lower than the sea, and has been girdled by dikes to keep out the ever-battling enemy. There are thousands of miles of earthworks, and thousands of eyes are fastened watchfully upon them, for the slightest breach in them may cause irreparable damage. The work of strengthening and extending these dikes is forever going on, and the battle between the surging sea and rushing rivers, and the banks of earth and granite never ceases. The land is constantly changing; islands are formed and destroyed. One province is fertilized by overflowing rivers, another is impoverished by settling sands; winds and waves are ever busy changing the earth and transforming the men who struggle with them.

Once all of Holland was impenetrable marsh or sandy stretches of desert, but the silent, courageous, ingenious Dutchman drained the marshes by his enemy the wind; cut channels through sand-banks and made the water his servant; carried slimy bog to the sandy patches, mixed them, made new land and created meadows, until the land is flowing at least with milk if not with honey.

Under what difficulties the Hollanders labored no one can understand. They had neither wood, iron nor stone; just mud and sand and plenty of salt-water and a tremendous lot of pluck. Silently, determinedly they labored, fought and conquered. This country which had to manufacture its soil, and has to defend every inch of it against the sea, now sends out agricultural products to the value of fifty million dollars annually. Nearly two million cattle graze on her meadows, and she supports in proportion to the extent of her territory as many people as the most populous country in Europe.

Hollaud has fought as valiantly with men as she has fought with the sea; liberty's torch was never extinguished by the Castilians' flood of soldiery, and the Hollanders are to-day among the most patient, industrious and bravest on earth.

Holland is always fanning herself, and the huge wings of her windmills are ever revolving. These windmills are the general roustabouts of the country. They grind feed and flour, do the washing, break stone, saw wood, pulverize spices, manufacture snuff-

A FARM SCENE IN THE NETHERLANDS

A DAIRYMAN'S DOG-CART

tobacco, churn the butter, pump the water from the marshes; in fact, they do nearly everything on the farm except milk the cows. A mill in Holland is regarded as a fortune, and a girl who is to receive one as a dowry has no lack of suitors. It is better to be born with a mill than a pretty face.

The Dutch farm is certainly the model farm; the house is always cheerful, painted green or red, surrounded by a small garden full of old-fashioned flowers. Close to the house is the barn, which also contains the cow-house; or, pardon me, the cow's parlor, for first of all the animals are immaculately clean. A stream of water runs behind them, which carries off all dirt; their tails are tied to the beam above them; the floor is spotlessly clean, there are no unpleasant odors, and the cows look at you proudly and condescendingly as you are introduced to them. Each cow has a pet name, and is brushed and washed and primped every day, and is always ready for company. The butter-room is the sanctuary of the house, and is "as clean and beautiful as a temple, and as cool as a grotto." The floor in many places is of tiling, flowers grow in pots in the windows, and everything is cared for with as much reverence as in a sanctuary. Holland butter brings a high price in London, and from the one little province of Friesland alone sixteen to twenty million pounds of butter are exported annually.

In some provinces the dog plays as great a part as the windmills, and in the cities he pulls loads which seem heavy enough for a horse. Almost universally the milk-cart is pulled by dogs, and coal merchants send their fuel by dog-express.

The Dutch farmer is a silent, stanch fellow, always smoking, going to bed smoking, getting up smoking; and the only place really exempt from the fumes of tobacco is the sacred butter-room. The Dutch women! Ah, yes! These Dutch women are much ornamented by strange-looking pins, buttons and chains, hundreds of dollars' worth of jewelry on neck and fingers, short-skirted and wooden-shoed; with the color of the sky in their eyes, the tint of the rose on their lips, the blush of the peach on their cheeks and the shape of the moon in their faces. "And that's the Dutch that can't be beat."

Holland is a country which, if once visited, lures you until you come again, and when you leave it is always with regret, for a people so strong, so brave, so industrious and so heroic one seldom meets. Among the European peasantry they are the most intelligent and the most independent, and may well be proud of their little country, the birthplace of modern science, where liberty was cradled and loved, and where human endurance and intelligence have wrought the greatest agricultural wonders.

THE Netherlands are largely composed of the alluvial deposit of the Meuse, the Scheldt and the Rhine. For countless ages the soil of France and Germany, building up the mainland as the Nile has done in the Mediterranean, and the Mississippi in the Gulf of Mexico. The sea in return cast up its dunes and sand-banks. Back of these, and behind the hardening slime which the rivers heaped up from side to side as they straggled on their course, most of the country was a broad morass. Here and there were islands which seemed to float on the surface of the ooze, tracts of brushwood, forests of pine, oak and alder, while tempestuous lakes filled in the picture. Along the coast appeared a succession of deep bays and gulfs, through which the Northern ocean swept in resistless fury. At length the wearied rivers appear to have given up the contest, and lost themselves, wandering helplessly amid the marshes. Then man took up the struggle. Little by little the land was rescued; dikes chained the ocean and curbed the rivers in their channels; lakes were emptied, canals furrowed, and even the soil created.

"In this warfare of the elements the brunt of the contest fell on the hollow-land, or Holland. It had no iron—in fact, no metal of any kind—for tools, and no stone for houses or for dikes. Even wood was wanting, for the early forests had been destroyed by tempests. To this country Nature seemed to have denied nearly all her gifts; so that, almost disinherited at birth, it stands a vast monument to the courage, industry and energy of an indomitable people. From end to end it is to-day a frowning fortress, keeping watch and ward against its ancient enemy, the sea. . . .

"On this patch of manufactured earth was realized the boast of Archimedes. The little republic, just come to maturity when America was settled, vanquished and well-nigh destroyed the mightiest military power of Europe. Shortly afterward it met the combined forces of Charles II. and Louis XIV. of France. As a colonizer it ranks second to England alone, reaching out to Java, Sumatra, Hindustan, Ceylon, New Holland, Japan, Brazil, Guiana, the Cape of Good Hope, the West Indies, and New York. To-day the waste which the ancients looked on as uninhabitable is among the most fertile, the wealthiest and the most populous regions of the world; its people stand the foremost in Europe for general intelligence and purity of morals."—From "The Puritan in Holland, England and America."

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WITH THE VANGUARD

IN JULY, 1853, Commodore Perry with a squadron of United States war-vessels steamed into one of the harbors of Japan. In March, 1854, a treaty was signed which broke down the policy of isolation followed by Japan for more than two centuries, and opened up her ports to foreign commerce. Forty-five years ago the armed intervention of the United States brought Japan into the family of modern nations, and since then her progress in Western civilization has been marvelous.

By new treaties with all the leading countries of the world which went into effect July 17, 1899, Japan has been raised to the rank of an equal among nations. Outlining the more important features of the new arrangement, Mr. Jutaro Komura, the Japanese minister in Washington, says:

"The seventeenth of July marks the turning-point in the diplomatic history not only of Japan, but of the oriental countries in general. It will be the first instance in which the Western powers have recognized the full sovereignty of an oriental state. This action of the enlightened nations of Europe and America shows that if any country is ready to assume a full share in the responsibility and affairs of the world at large these old and enlightened powers are ready to admit such a country to full comity among nations. So we regard the advent of this treaty as a very important step not only for Japan, but for all the nations of the East.

"To understand the change it is necessary to look at the system under the old treaties. This was essentially based on two principles: First, that foreign residents in Japan shall enjoy the privileges of extraterritoriality, that is, they should be amenable to the laws and jurisdiction of the consul of their own country and not to Japanese jurisdiction; and, second, that foreign residents in Japan shall be confined to certain open ports, outside of which foreigners could not reside, own property or engage in trade. The result was, in effect, about fifteen or sixteen systems of courts in Japan, for the purpose of trying foreigners who commit offenses in Japan. Furthermore, most of the powers claimed that Japanese laws were not binding upon foreigners. For instance, take our quarantine law. While it protected us as against our own people, yet there was no protection in the case of an infected foreign ship. The only exception to this refusal to recognize Japanese law was the United States, which recognized from the first the binding force of the Japanese law.

"One of the bad effects of this system was that foreign residents had entire immunity from taxation. The Japanese paid all the taxes. All this has now disappeared, and foreigners have the same privileges as well as the same obligations as the Japanese citizens, no more and no less. The first step in the new system is to put an end to the old fiction of extraterritoriality, by which foreign citizens were judged by different standard from Japanese.

"The second essential thing is the opening of the entire interior of Japan to foreign residents and trade. Until now there have been only five treaty ports—Yokohama, Nagasaki, Kobe, Hakodate and Nigata. In those places foreigners had been able to live, to purchase property and to trade, but outside of there they could not even travel without a special permit. These five places are an insignificant part of Japan. Henceforth the entire interior of the empire, with its populous cities and inviting fields of industry, is thrown open to foreigners. They may live anywhere, engage in any kind of business, and will be assured of the same protection to life and property that is given to the Japanese.

"In bringing about the new system of treaties Japan naturally feels most friendly toward the United States, because she always has shown a most sympathetic interest in Japan's desire to adopt modern methods, and to deal on even terms with the rest of the world. The messages of several of the presidents have spoken in most friendly terms of this matter. And so, as States have taken such a friendly interest under the old system, I hope and believe that the United States government and people will take a most friendly interest in the carrying out of the new treaty."

THE following statistics of the railways in the United States for the year ending June 30, 1898, are taken from the advance statement of the "Interstate Commerce Commission:"

On June 30, 1898, the total single-track railway mileage was 186,396.32 miles, an increase during the year of 1,967.85 miles. The aggregate length of railway mileage, including all tracks, on the date given was 247,532.52 miles, an increase during the year of 4,088.11 miles.

The number of persons employed by the railways on June 30, 1898, was 874,558, an increase of 51,082 compared with the number for the previous year. The number of employees on June 30, 1898, was 956 in excess of the number on June 30, 1893, and 89,524 in excess of the number on June 30, 1895. The aggregate amount of wages and salaries paid during the year ending June 30, 1898, to more than ninety-nine per cent of the persons on the pay-rolls was $495,055,618, an increase compared with the preceding year of $29,454,037. This amount of compensation represents over sixty per cent of the total operating expenses of railways, and nearly forty per cent of their total gross earnings.

The amount of railway capital outstanding on June 30, 1898, not including current liabilities in the term, was $10,818,554,031, which represents a capital of $60,343 for each mile of line.

The aggregate number of passengers carried during the year ending June 30, 1898, was 501,066,681, an increase over the preceding year of 11,621,483. The number of tons of freight carried during the year was 114,077,576,305, which, compared with the previous year, shows the large increase of 18,938,554,080 tons.

The gross earnings, covering an operated mileage of 184,648.26 miles, were $1,247,325,621, being greater by $125,235,848 than for the preceding fiscal year. The operating expenses were $817,973,276, being an increase of $65,448,512 compared with the previous year. The income from operation, or net earnings, was $429,352,345, an increase of $59,787,336 over the preceding year.

The total number of casualties to persons on account of railway accidents during the year ending June 30, 1898, was 47,741, of which 6,859 were killed. Of railway employees, 1,958 were killed and 31,761 were injured. Of persons classed as trespassers, 4,063 were killed and 4,749 were injured. The number of passengers killed during the year was 221, and the number injured was 2,945. One passenger was killed for every 2,267,270 carried, and one injured for every 170,141 carried. Ratios based on the number of miles traveled show that 60,542,670 passenger-miles were accomplished for each passenger killed, and 4,543,270 passenger-miles accomplished for each passenger injured.

IN AN eloquent oration ex-Mayor Matthews, of Boston, recently said:

"While the commercial necessities of the country are a sufficient justification for our intervention in the East, loftier motives are not absent. We are in actual possession of a considerable part of the Philippine islands; we hold the legal title to the whole of them. We occupy a position of trust toward their inhabitants. The question is not whether we shall let the Filipinos govern themselves, but whether we shall allow a small portion of them to misgovern all the rest. We have no more right to abandon these islands and their occupants to savage or semi-civilized misrule than Admiral Dewey had to scuttle his ships after the battle of Manila. As trustees we cannot resign.

"The practical duty of the United States, which no amount of historical misinformation will enable us honorably to avoid, is to re-establish peace and civil order in the Philippine islands, and to do it at once; and then to formulate a scheme of government for the islands, framed for the sole purpose of promoting the material welfare and political progress of their inhabitants. Precedents for the administration of some of the islands may be found in the history of the United States territories; suggestions for the government of others may be offered by the experience of other countries in similar undertakings. The difficulty to be [illegible] ernment, but in the execution of them.

"If we administer the Philippines with the same unselfish purpose which has inspired our territorial policy, introducing our ideas of civil liberty and law wherever they seem applicable, permitting as much of local self-government as the people seem qualified to enjoy, developing the resources and improving the condition of the islands for the benefit of the inhabitants, and only incidentally for our own; if, in short, we keep our minds set on what we can do for the Filipinos, not on what we can get out of them, then there ought to be no insuperable difficulty in governing our dependencies in the Pacific to the satisfaction of their inhabitants, the honor of our own people and the profit of both.

"Many persons seem to fear that the extension of the sovereignty of the United States over the Philippine islands, and the adoption of an active policy on the coast of China, will tend to increase the difficulties of our domestic policies. . . .

"The instinctive yearning of the people for activity and adventure cannot permanently be repressed; and their unoccupied energies will demand an outlet—territorial or political. As expansion will diminish the economic evils of the future, so the discussion of questions of international intercourse, foreign commerce and colonial government cannot fail to exert a healthy reaction and a steadying, elevating and invigorating influence upon the course of political controversy at home.

"If there ever was a time when the people who established this country looked forward to an era of continental isolation for them and their descendants, that dream has long since faded away, never to be revived. The New England which our Puritan ancestors founded, and which our fathers dwelt in, is gone, and gone forever. Its physical appearance, its industrial life and the character of its population have completely altered. It is useless for us to complain, even if we had the desire. The change was deliberate. The generation which preceded this welcomed the end of the 'long winter of New England isolation,' brought about by the invention of the railroad and the steamboat; and the New-Englander took up his historic burden and became again the pioneer.

"We can either take the part in the movements of the twentieth century that our position, abilities, necessities and the inherited aspirations of the people call for, or we can stand aloof in selfish, timid unenlightened isolation, and let the march of commerce and civilization roll round the globe without us. It is not a question of destiny, but of choice; and if we fail to choose wisely the fault will not be

"In our stars,
"But in ourselves that we are underlings.

"The American people never yet have failed on great occasions. They will not now. They will not permit the foreign policy of their country to be determined by considerations based on selfishness or fear. They will not shirk the duties or lose the opportunities which Almighty God has placed before them. They will cross the Pacific. When there, may they act so wisely and so justly by all the great interests committed to their care that in after ages the chief anniversaries to be celebrated by the regenerated and grateful populations of Oceanica and China will be those of the battle of Manila and the Fourth of July."

THE figures which were recently given out by the Treasury Department show that the fiscal year ending June 30, 1899, was the largest year of foreign trade in the history of the United States. The total foreign trade, exports and imports, was, in money value, over $1,924,500,000, which exceeded the foreign trade of the preceding year by nearly $77,000,000. The total exports were $1,227,443,425, about $4,000,000 below those of 1898, and $177,000,000 larger than any other preceding year.

The total imports were $697,077,388, an increase of more than $81,000,000 over the fiscal year of 1898. The increase of imports is largely in sugar and in partly manufactured articles used in process of manufacturing in this country.

The excess of exports over imports for the year ending June 30, 1899, was $530,366,037. The excess of exports in 1898 was $615,432,676, and in 1897 it was $286,263,144.

The excess of exports, or so-called balance of trade in our favor, for the past three fiscal years aggregated over $1,432,000,000.

THE expansion of exports of manufacturers—an increase of nearly $45,000,000—did much to make up for the decline in the value of agricultural exports. Of these the greatest falling off in value was in wheat and wheat-flour, due to much better grain crops abroad in 1898 than in 1897. However, the decline was due to lower prices, not to the quantity exported. The average price for a bushel of wheat exported in the fiscal year ending June 30, 1899, was a little less than 75 cents, against 98.3 cents for 1898. The total quantity in bushels of wheat and wheat-flour exported was over 4,500,000 bushels greater than in the preceding year.

Taken in connection with this year's wheat crops both at home and abroad, the last item has a most important bearing on the future of wheat prices. In the twelve months ending with June, 1899, we exported more wheat than in the preceding year, when the European crops were much smaller. According to latest reports and estimates no country in Europe has as large a wheat crop this year as last, the decrease in Russia alone being 120,000,000 bushels. The present wheat crop of the United States is far below that of last year. The estimates for both years vary considerably, but the yield is at least 150,000,000 bushels less than last year. In brief, our crop is smaller and Europe needs more of it. The statistics are all on the side of advancing prices. During the past fiscal year we sent abroad nearly 222,000,000 bushels of wheat, flour included, at a yearly average export price of nearly 75 cents a bushel. The present wheat situation of the world indicates a larger export this year and a higher yearly average export price a bushel.

UNDER the heading, "The First Principles," the New York "Sun" makes this concise comment on the Brooklyn street-car strike:

"The right to quit work is as indisputable as the right to work.

"The sufficiency of the reasons for quitting is a question which concerns the quitter.

"The right of the other man to step in and take the job is likewise indisputable.

"As long as both of these rights are respected, the striking labor and the superseding labor are equally respectable."

More Health Hints Accidents will happen, especially where there are children. People who handle knives, forks, scissors, glass, sharp-edged things of all kinds, boiling water, lamps, hot flats, stoves, etc., must expect to be cut, bruised, burnt or hurt in other ways at times. Injuries of minor importance are a common occurrence in any family, and those of a more serious nature are also liable to happen at any time. People are careless, and will continue to be as long as the world is being run on the same old plan. A physician is not always close by or quickly to be reached, and rural people are often obliged to rely on their own devices for awhile. I believe that it is the duty of every man of family to be prepared for emergencies, and I try to live up to this doctrine. At least there are certain drugs and appliances of which we never (hardly ever) fail to have a supply on hand. On the shelf, ready for immediate use, stands a bottle with carbolic acid (crystals), and in a pigeonhole on my desk, always open to the family, may be found a roll of surgeon's rubber adhesive plaster, such as one can purchase, done up in a neat tin case, at any large drug-store for about fifty cents. The piece of plaster is about eight inches wide and a yard long, but what a lot of "patching" any one can do with it! The way the children run to it for a little patch every little while brings more clearly to my knowledge how frequently these trifling injuries that by neglect are liable to assume a more serious character do occur in a family. The farm help, too, comes in for a generous share of cuts and bruises. In short, there is a lot of skin-patching to be done all the time.

* * *

What to Do In the first place we should learn to recognize the fact that nature is the great healer. What we expect from the plaster, or any application, is to prevent interference with nature's way of healing. All our salves and lotions can do little in the way of healing or restoring. The only thing we can aim to do by their use is to keep things out of and away from cuts, burns, sores, etc., and let nature do the rest. First of all get the bruise or cut thoroughly cleansed and disinfected. The only real danger comes from the germs that may find entrance through the break or abrasion of the skin into the blood and body. Among these germs are those of the fatal lockjaw. Get soft water, as hot as can be borne, and add from one to two per cent of carbolic acid. Into this solution hold the bruised part, and thus help to diffuse and disperse the blood that otherwise would coagulate and cause the black and blue spots. If an open wound, wash it out with the carbolic-acid solution, and finally apply a piece of the adhesive plaster. Use plaster enough to cover well and hold it on well. Then let the injury take care of itself. Keep the wound thus clean and covered and there will be no "taking cold" in it.

* * *

Burns For burns, especially if not severe enough to destroy the skin, the adhesive-plaster covering can also be recommended. My practice, however, is to make a thick paste of common baking-soda (saleratus, bicarbonate of soda) and water, and put this thickly on the burned surface, then wind a cloth around it to keep the paste in place for awhile and the injured portion tightly covered. The pain ceases when the air is kept from the burned surface. After awhile the soda paste is removed and the spot covered with adhesive plaster. For severer burns apply quickly a thick covering of saleratus paste, petroleum, butter or oiled cotton, and call a physician.

* * *

Stings and Bites Among the minor ills of life, but sometimes very annoying ones, are the stings of bees, hornets, wasps, the bites of mosquitoes, fleas and various other flying and creeping things. Children sometimes suffer a good deal from that source, and often the affliction, through swelling, itching, etc., becomes almost unbearable. In strong ammonia we have perhaps the best remedy for these troubles, and I always have a bottle of it on a shelf in the kitchen. I buy it in one of the large drug-stores, and pay from twenty-five to thirty-five cents for a pint of ammonia of twenty-two to twenty-six degrees B. strength. Keep it tightly corked all the time. It is liable to eat an ordinary cork, and if open will soon lose its strength. Put a little of it on a wet rag and apply to the bee-sting or mosquito-bite. It usually gives almost instant relief.

* * *

A Water Cure I am not cranky enough on the water question to believe that water in itself is a cure-all. I even fear the fresh water from most wells when used as a beverage. Typhoid fever lurks in many wells, and I prefer to avoid unnecessary risks. Boiled water, such as hot lemonade, or hot water flavored or medicated in any sensible way, is always safe, and I believe has great medicinal virtues. I am convinced that rheumatic and other poisons can be washed out of the blood by the free use of such hot drinks taken half an hour or so before each meal. The water will do no harm; it may do good. It often relieves or cures dyspepsia. The acid of the lemon helps to cleanse the stomach walls and to stimulate liver action. Don't imagine, however, that one or two glassfuls of hot water or hot lemonade, taken at long intervals, will do remarkable things for you. You must not expect wonders. Take your pint or half pint regularly before each meal right along, day after day, week after week, month after month. It is worth a trial. Your dyspepsia or your rheumatism may leave you after a short period of such treatment. Be persistent in it.

* * *

In the Swim Water is also a good thing for exterior use. In hot weather I like to take my swim occasionally—and I prefer a large body of water for it. An ocean bath is a luxury to me. Next to it comes a swim in the surf of a large lake or in an open river. Go into the water before, never right after dinner or supper. If you have to take a long walk to get to the water, take time to thoroughly cool off before going in. Learn how to swim. It is easy. Sometimes the use of a life-preserver will help you to learn how, and at any rate make you feel safe and comfortable in the water. Only a minority of people, however, enjoy water privileges of this kind. The great majority live too far away from larger bodies of water to take their daily swim or bath. But everybody might have at least a wash in a tank or tub. All modern houses are built to contain a bath-room. In the colder seasons I like to take an occasional wash in plenty of quite warm water, and to wind up by sponging off with cold water to which a little ammonia has been added. It is a refreshing and health-giving procedure.

* * *

Finally I feel like saying a good word for the vapor-bath cabinet. Free perspiration is one of the ways by which the body ejects a lot of waste materials which, if they were to remain, would act as poisons in the blood. I do know that free sweating purifies my blood. A good vapor-bath cabinet with alcohol-lamp, etc., can now be bought quite cheaply. I bought one (as advertised) for $5.00, and I think I got my money's worth. Directions how to use it go with the cabinet and may safely be followed. On the other hand, I find very little good from electrical treatment, and believe that electricity as a curative agent is frequently overrated.

T. Greiner.

SALIENT FARM NOTES

Second Crops When such garden truck as peas, early cabbage, etc., is removed, as they should be when past their prime, I plant the ground they occupied with sweet corn to catch the fertility which would otherwise go into weeds or be entirely wasted. It does not pay to let a foot of ground lie idle and bare, or to grow a crop of worthless weeds; and unless one has something of value growing on the land he is very apt to let the weeds take it. Any of the earlier varieties of sweet corn planted as late as this will make lots of excellent cow or pig feed before frost, while the land upon which it grows will really be benefited by it. Nothing about the farm gives it a more woeful, neglected appearance than a garden overrun by weeds. If you have no sweet-corn seed plant cow-peas, soy-beans, or sow buckwheat or even millet. Anything that is useful is better than weeds, while it will make the garden look neat, tidy and attractive.

Apple-borers The excellent, refreshing sauce that early apples now make reminds me that now is the time to look over the trees for borers. Don't let these pests destroy the trees after you have grown them to bearing age and are just beginning to get paid for your trouble. Look closely and carefully on the ground close about the base of each tree, and if there is a borer at work in it his castings, which resemble sawdust, will be seen and he can be located in a moment. All the tools needed are a knife and a short piece of broom-wire. If one has to cut much of a gash to get the pest out it is a good idea to pack it with grafting-wax. If one has none on hand it is a good plan to bank the earth up about the tree so as to cover and protect the wound. One can usually get a borer without much cutting by running the wire along his tunnel. When one punches the stuffing out of him the end of the wire puncher will show it, being covered with said stuffing.

* * *

Summer Outings I notice in some of my papers that the wife of Banker Percent, the daughters of Lawyer Legal and the son of Merchant Trade have all gone to Mackinac or some other summer resort, presumably in search of health or pleasure. They did look rather pale and somewhat fagged the last time I saw them, and fresh air and sunshine will do them good. There was a time when I thought that people who could go "summering" were the most favored of all humanity and got more than a fair share of the good things of life. But the opportunity came for me to go to some of these places and see them in their glory, chasing after health and pleasure at $1 to $5 a chase, and I very soon decided that while the chasing was good and abundant, the catching was not "in it," as the thoughtless say.

* * *

At the most noted resorts all was noise and din and rush and roar. Hackmen, hucksters, fakirs and show people were bawling and calling on every hand, while the hotel-runner and the boarding-house solicitor were very much in evidence. I failed utterly to see where or how anybody was getting much pleasure or health from the pomp, parade, glitter and frippery at the high-priced hotels. When I sought the quieter places of less note I found people suffering with ennui and wishing they had gone somewhere else, and getting about as much rest and pleasure as an active boy would shut up in an empty eight by ten room. The only people who were actually having a good time were the parties of ten to twenty-five, relatives and friends, coming from one town or neighborhood. They came for pleasure and to see the sights, and so many being together they were practically independent of all outsiders for rollicking fun, while they got reduced rates on everything. When one of these parties came down on one of the quiet resorts in the back districts they were greeted with as much delight by host and guests as a circus is greeted by the children of a small village.

* * *

My observations at both the popular and quieter summer resorts of the North fully satisfied me that the only way to have a good time at any of them is to go in a party of not less than fifteen neighbors and friends, each determined to sink personalities and have a real jolly good time. Such parties can get reduced rates from railroads, hotels and everything else, and their outing will be something to be remembered with pleasure while they live. They should elect a committee of three directors before they start, and this committee should secure rates, pay all bills and decide all questions. The most successful parties I ever met were thus managed, and they invariably got full value for every dollar they spent.

* * *

But to come back home, many of us are in debt, or our crops were too short last year to enable us to take much of an outing, so we must make the best of our surroundings. The life of a farmer is not like that of a merchant, banker or lawyer. He is in the fresh air all the time, while he can, if he will, have the best and freshest of all that grows in his latitude on his table at all times. And if he does not overwork or expose himself too much he may be as healthy as any man living. Still he needs an outing, a change of associations and surroundings, for a short time. They serve to brush the cobwebs off his brain and broaden his views of life, make him more liberal in his ideas and give him something new to think about—a change that is refreshing and invigorating. I think it makes of him a better farmer, and inclines him to improve and beautify his home and farm more than he otherwise would.

Farmers' institutes and agricultural fairs are all right in their way, and all farmers who desire to keep in the front ranks will attend as many of them as he can; but, as a friend of mine said, "It's the same old thing. They wear a fellow out." They are simply schools of instruction, and attending school is not having an outing. To have an enjoyable outing, a brain-rester, one must leave the farm and all its cares behind. He must set out to be a boy again, and get all the pleasure he can out of everything that comes along. He must drop shop, forget the soil, kick up his heels and yell! A short railroad trip to a river or lake and a few days' camping with a few neighbors costs but little, yet it gives one a chance to expand his lungs, shake up his liver, live on tough fare, laugh and yell as loud as he can, sing old ballads and fight mosquitoes and upset hornets' nests.

* * *

The wife of a farmer needs an outing more than he does, and it would surprise her to have him courting her and smiling and smirking as he did when he wore uncomfortable clothes and came every Sunday night to see her. She would enjoy a short outing away from the chickens, churn and broom as much as he, and it would give her new life, new energy and make her feel that she is not a slave to the everlasting grind of farm-house work. As I said, such an outing would cost but little, while its benefits would be incalculable. It is hardly worth while to wait until we can afford to have a good big outing away off in some other state. That time may never come. I think it would be better to have several little inexpensive picnics as we go along. We will enjoy them more, and they will do us more good. We shall come home feeling more like we were working to live than living to work. Almost any farmer can spare a few days this month for an outing; get together and take it. You will enjoy it more than the Fourth of July or Christmas—more than twin calves or nineteen cents a dozen for eggs.

Fred Grundy.

UTILIZING THE WASTE PLACES

On a [illegible] fields was a mud-hole covering an eighth of an acre, caused by the spreading out of the brook. The farmer believed in utilizing the waste places and making every part of the farm contribute to the general purpose. The spring from which came the brook could not be interfered with because it produced excellent water and was worth more than anything that could be grown in the meadow, for after passing through the swamp it ran into a trough in the pasture where the cattle had access to it.

There were several ways of improving this meadow and of giving the water from the spring uninterrupted flow, but all were costly except the one decided upon. He made a cranberry bog of the meadow. It costs about three hundred dollars an acre to make a good bog, but it pays. Several things are necessary, and one of them is facility for flooding in the fall to prevent damage by early frosts. In this bit of meadow the farmer raised cranberries as large as cherries, always welcome to any table, and always in demand in the market, especially when sugar is low. Wherever there is a perennial spring or brook (heaven help the farm that has neither) there are usually moist, untillable places, but exactly adapted to cranberry culture. Put in a few cranberry-plants, for crauberry sauce is sauce for anything. It is more than sauce; it is food, and may be just the medicine the system needs.

George Appleton.

RYE AS A GREEN CROP

While nitrogen is the fertilizing element most easily lost from manures and soils, it is the most expensive, costing almost three times as much a pound as potash and phosphoric acid. The readiness with which nitrates are washed out of the soil during heavy rains when the ground is thawed suggests that during the period of such rains it should be covered with some catch-crop, which will feed upon the nitrates formed and store nitrogen in its tissues. For this purpose rye is an excellent crop and is much used. While it adds no nitrogen to the soil which is not already found therein, as crimson clover does, it is a much surer catch than the latter, and is thoroughly hardy. It forms quite a root system during the fall, starts off early in the spring, and by ordinary planting-time forms a heavy coat of manure to be plowed under.

Guy E. Mitchell.

OUR FARM

FARM THEORY AND PRACTICE

THE DUAL-PURPOSE COW.—The leading editorial correspondent of an Eastern farm journal says: "We never have believed in a Jack-of-all-trades man, and do not want any Jack-of-all-trades cattle on the farm." He proceeds to relate his experience in trying to procure a profitable milking strain of Shorthorns. He consulted with a noted breeder, was told what strain was best, and secured two heifers and a bull at a long price. The result, as he states it, was that one heifer did not breed at all, the other required the assistance of one of this gentleman's pet Jerseys in raising a calf, and the cattle-grazers of the neighborhood would not give a dollar for the service of the bull. The male calves of this sire were given away to the farmers. On such experience does this writer base his advice that the farmer should select a breed wholly for butter production or wholly for beef production. Let us look into the facts.

Any man of experience knows that this gentleman was either very unlucky with the animals bought or else was the victim of a confidence game. It is folly to undertake to give the impression that there are not strains of Shorthorns and of other beef breeds that produce immense amounts of milk and butter. The records of the cows and the experience of tens of thousands of owners settle that point. This writer may have lacked judgment in selection, but his experience is utterly valueless as proof that such strains do not exist, and it should not have been imposed upon the readers of his paper as a sort of proof.

* * *

The gentleman I have quoted assumes that farmers are wanting only beef or only milk and butter. This is the assumption of most advocates of the milk breeds, but it is a huge mistake. I know districts in which the farmers do want only milk, and the cow is a machine for the production of that article. In other sections only butter is sought. The amount of butter-fat produced daily by the cow determines her value. In such districts the fine-spun theories of our theorists work to a nicety. But it is a safe assertion that three fourths of our farmers are so situated that they need a few cows for two distinct purposes, and they understand those needs very thoroughly. Dairying is not their specialty—all men cannot be dairymen—and neither are they extensive feeders of beef-cattle. They grow grain and some vegetables; they have some pasture-land, and some cows are kept for the double purpose of furnishing income from milk or butter while consuming the produce of the farm and of furnishing some calves for grazing and feeding. The calves are wanted for grazing and feeding, and cannot be bought in sufficient numbers: the cows are wanted to convert grain, corn fodder and clover hay into butter at a profit. Such dairies exist all over this country, though not in the number they should, simply because the specialists have exerted undue influence through constant labor at institutes and in the farm press. The most of the country needs better calves for grazing, and milking strains of large breeds should furnish them. The Jersey is all right in her place, but that place has its very distinct limitations.

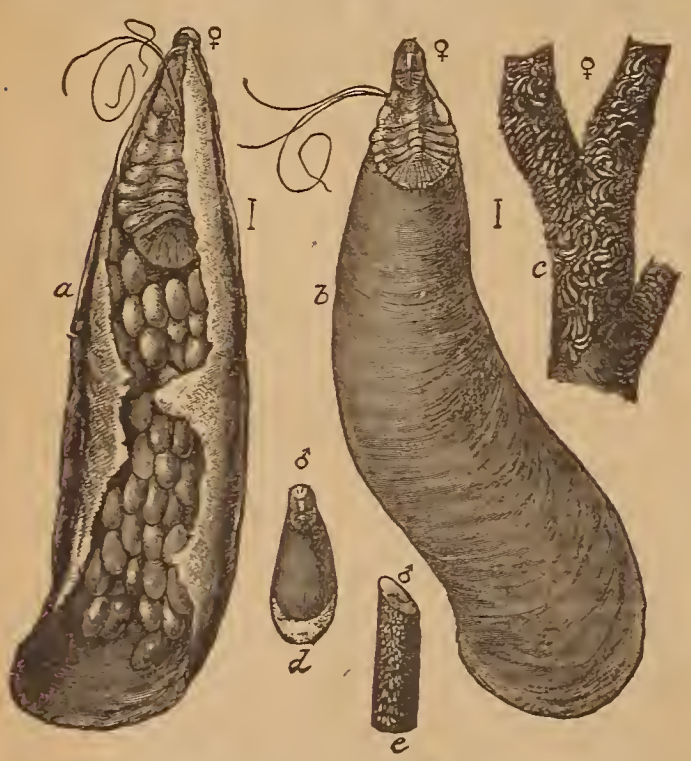
* * *

There are butter-cows for the great butter-producing districts, and there are milk and cheese cows for other extensive districts, and there are milk-producing strains of beef breeds for a territory three times as great as the special dairy districts. This territory is occupied by men engaged in diversified farming, and the cows that are kept should pay a profit from the milk while producing the choice calves so badly needed for grazing and feeding in limited number on nearly half our farms. The scarcity of good feeders is notorious in recent years. The fields that should be producing grass and grain for them are placed under the plow, and the products are sold off the farms, simply because the farmers are not, and should not be, extensive dairymen, and the calves for profitable grazing cannot be had. There is room for the dairy breeds where they belong, and the attempt to supplant larger breeds with these special-purpose breeds in accordance with a theory that does not take into account the conditions that prevail where diversified farming and stock-growing are practised is a great mistake. Until all farmers become specialists—a condition of things utterly impossible—there will be a need for a general-purpose cow and a general-purpose horse.

* * *

"CHEMICALS AND COW."—Under this caption a leading writer says: "I can remember the time when these fertilizer farmers looked upon a cow as more or less of a nuisance. Years ago some theorists affirmed that the question of fertilization hinged wholly upon the willingness of the farmer to apply the needed plant-food in the form of commercial fertilizers. Enthusiasts are apt to go too far in their claims for anything comparatively new. Local conditions are the controlling factor all the time. It has been learned that the soil must have humus in it. The Eastern farmer converts his coarse stuff into manure through the agency of the cow, making a profit from it. Some Western farmers can afford to leave some of the stuff on the land unharvested, turning it under for humus. There are few laws of universal application in farm management. The dairyman may need his Jersey or Holstein, the Eastern truck-farmer may need a few cows to consume clover, corn-stalks and vegetables, the Westerner may need a purely beef breed, and the ordinarily successful diversified farmer of the central states may need cows that can produce both butter and good calves. The ordinary farmer should not be misled by advice suitable only to special districts and to individual farmers peculiarly situated for some reason. The successful man is the one who studies all methods carefully, and then uses his own judgment in adapting or modifying according to his circumstances.

DAVID.



THE OYSTER-SHELL BARK-LOUSE *(Mytilaspis pomorum)*
a, ventral aspect of female scale, enlarged, showing wintering eggs; b, same from above; c, twig covered with female scales, natural size; d, male scale; e, male, natural size. (After Howard)

THE PROBLEM OF PURE FOOD

There ought to be no problem about it. In a country like ours, with its millions of acres producing everything which human heart could desire, it should always be possible to have upon the table, in the poorest home as well as in the most costly mansion, the purest of foods that Nature can bestow.

But the problem is with us; that we know. Official reports from the Department of Agriculture at Washington show that flour and meal are adulterated by the use of mineral matter to increase their weight, and alum to improve their physical appearance, while the seeds of various weeds are used to cheapen them. Spices are cheapened by the use of wheat-flour, potato-flour, linseed-meal, gypsum and clay to increase weight, and radish, rape, ground corn, rice, pea-flour, buckwheat-hulls, cocoanut-shells, olive-stones, sawdust, clove-stems, sago-flour, arrowroot, ground crackers, red ocher and sandalwood are used to keep up the bulk. Cream of tartar often contains calcium sulphate, calcium carbonate, alum, acid phosphate of calcium and starch, while baking-powders are rarely pure. Vinegar is frequently diluted with water and also contains at times numerous mineral acids.

ANGULAR-WINGED KATYDID (After Riley)

Canned foods afford peculiar temptations to those who are seeking for methods of cheapening their products. Copper, lead, tin and zinc have been found in these foods.

* * *

The chemist of the agricultural department of New York state within the past year has discovered one hundred and twenty-five different articles of food in common use all of which are adulterated. To visit the state capitol and inspect this array of impure and cheapened foods as they are ranged upon the shelf in glass cans is enough to strike terror to the heart and cause one to wonder what will be the future of the American people. Is it any wonder that we are a race of dyspeptics, or that men die suddenly in numbers never before known in this country? Not alone the present generation, but those who come after us, must suffer from these criminal attempts to gain wealth fraudulently. Nor is it alone in point of health that the nation must suffer. A sick man, or a man whose digestion is out of order, is not a sound man mentally or morally. His judgment will surely be warped and his reasoning more or less colored by his physical state of being. The result must be, then, natural deterioration.

What can be done to put a stop to this wholesale adulteration of the articles we eat? Easier asked than answered. It is of no use to tell men to stop buying and using impure foods. Do the best we will we may be deceived. Some of the states are pursuing independent investigation with a view to legislative enactment along this line. Some have already placed upon their statute-books laws intended to lessen the evil, but all such efforts cannot help being partial failures. There must be national enactments before any positive good can be brought about. For this every farm journal should work, and work hard, for a food adulteration strikes the farmer as hard as it does any one else. True, the nearer one lives to the soil, the more sure he is of getting pure food; but he cannot raise all he eats, and every adulteration of flour, vinegar, meal, etc., strikes a blow at the labor of his hands. But aside from any utilitarian motive it should be the duty of all to do all they can to bring our food products back to a state of purity. The welfare of the nation depends upon it.

EDGAR L. VINCENT.

WOULD-BE SAN JOSE SCALES

With the furor that has been made over the spread of the San Jose scale in the East during the past few years, almost every wide-awake farmer has wisely constituted himself a local inspector and examined all his own and neighboring trees for the presence of this dreaded orchard pest. Concerning the San Jose scale itself little need be said, as it has been described and redescribed in all of our agricultural papers. But in his examination the farmer frequently finds some insects which he very reasonably mistakes for or thinks possibly may be the San Jose scale. I am constantly receiving a great many queries concerning samples of insects sent, asking if they are the genuine San Jose, and if not, what they are and how to treat them. Three forms are especially numerous among the specimens sent in, and a word concerning them may be of interest.

* * *

The two insects most commonly mistaken for the San Jose are also scale-insects, and occur commonly in almost every orchard throughout the country, but only occasionally become numerous enough to attract attention or to do noticeable injury. The oyster-shell bark-louse occurs on a wide variety of food-plants, but is most commonly found on apple. It may be recognized by the rather striking resemblance which the female scales—as indicated by their common name—bear to an elongated oyster-shell. This insect was probably imported from Europe on nursery stock by the early settlers of this country, as it was known there during the last century, and has since then spread throughout the United States wherever apples and pears are grown, being more common in the North than in the South. The life history of this species differs from that of the San Jose scale in having an egg stage; the young of the latter being born alive without an egg. If the female scales are examined during the winter, under the anterior part of the scale will be found the shrunken body of the female, while behind this a mass of yellowish-white eggs fill up the remainder of the scale, from forty to eighty-five occurring under a single scale. In the northeastern states these eggs hatch during late May or early June. The young do not travel far, soon settling down upon a young twig and thrusting their small beaks into the bark, after which the females lose all power of motion, though after a time the males have a winged stage. Though numerous specimens may be found upon the branches and trunk, the twigs are the only parts of the tree ever injured by this insect, and very rarely, if ever, do they occur on the leaves or fruit. After becoming fixed in its position the female molts twice, these two skins remaining in an overlapping position on the anterior part of the scale, which is a wax-like substance secreted mainly from the hinder part of the body. After laying her eggs the female shrivels up under the forward part of the scale, as already described, and the eggs remain securely incased over winter, only one brood occurring in a season. The male scale is much smaller than the female and has but one cast skin in its scale. It is much shorter and of a more oval shape than the other sex, and the hinder portion of the scale forms a flap which is so hinged to the main part of the scale as to permit the escape of the adult male; for the full-grown male leaves the scale as a winged insect, and lives but a short time after fertilizing the female.

SCURFY BARK-LOUSE *(Chionaspis furfurus)*
a, females on twig; b, males on twig, both natural size; c, d, female and male scales, enlarged. (After Howard)

* * *

The scurfy bark-louse is a native species and not quite so widely distributed as that just described, but is found very generally on pear and apple, especially in the warmer sections of the country. Its list of food-plants is hardly as extensive as the previous species, but also includes crab-apple, quince, black cherry, choke-cherry, currant and mountain-ash. The life history of this species is almost identical with that of the oyster-shell bark-louse. The eggs differ in being of a purplish-red color, from ten to seventy-five occurring under each scale and hatching in the latitude of Washington, D. C., about the middle of May. The female scale is much more broadly expanded posteriorly than is that of the former species, and is of a whitish color, giving the bark of the tree a characteristic "scurfy" appearance when thickly covered with them, from which the common name of the insect is derived. The male scale is very different, being very much smaller, pure white and having nearly parallel sides, and three elongated longitudinal ridges, one on each side and one in the center.

KATYDID EGGS (After Riley)

As the eggs of both of these scales are rather difficult to kill, the winter washes

[CONCLUDED ON PAGE 7 OF THIS ISSUE]

NOTES FROM GARDEN AND FIELD

Large Fruits.—The plan of thinning peaches, plums, pears and even apples for the purpose of making these fruits larger and better is coming more and more into vogue and favor with our best growers. Wherever it has been tried the results have been striking and often remarkable. Compare, for instance, the peaches which our friend Hale, from Connecticut, who runs those mammoth peach orchards in Georgia, sends to our summer markets—those beautiful, even-sized Elbertas, etc.—with the stuff with which the Michigan and Niagara county peach-growers flood the commission stores in Buffalo and other near cities—a few fine specimens at the top of the basket, and the interior and bottom of the basket filled with the vilest kind of trash, small, gnarly, wormy, a lot of stuff that no decent man would offer to another as a gift. The one class of fruit is the result of severe thinning; the other that of leaving the fruit in crowded clusters and strings, just as they grew; and many growers are all the happier and more satisfied the more their trees are overloaded. California has set us a good example for many years. The beautiful, temptingly displayed fruits from that state are given that appearance only by sharp thinning and most scrupulous care in packing. It is the California growers' only hope and salvation to stick to this plan, for their fruits naturally, when they come to the East after a week's transit across the continent, have not the high quality and fine flavor that our own fruits possess. Their fruits must look well to sell well. Were the people in California to ship trash—such trash as that with which our nearer growers habitually offend their customers—the returns would not be enough to pay the freight. Why is it that so many of our Eastern fruit-producers are so slow to learn a lesson and to adopt the methods of their successful Western competitors? All earlier reports to the contrary notwithstanding, there are peach centers along the lakes, in New York, Michigan, etc., that now seem to have the assurance of an enormous crop of this luscious fruit. If the growers wish to make the most of their chances this year, and save their reputation for the future, they must leave all the undersized, trashy stuff at home, to rot or be fed out, and send none but even-sized, well-developed fruit to our markets. The sooner they learn to understand this the better for their own welfare and profit, and for a wholesome tone of the fruit market.

* * *

I have already mentioned in former years that I thin my Bartlett pears quite severely; in fact, have to thin them if I want to have a chance to sell them with the rest of the pear-growers around here to the canning-houses. The buyers are always anxious to contract for the product of orchards in which the individual fruits average large. They often refuse to buy at any price from orchards where trees are overloaded, and the specimens therefore averaging small. I find that a few dollars expended for labor in thinning the heavily loaded trees are returned manifold in the quicker sale and better price secured for the crop that is left.

* * *

Thinning Small Fruits.—But it is not the tree-fruit alone that is made larger and better by thinning. Small fruits are served the same way. I have had several reminders of it this season. I have two rows of the Splendid strawberry. My friend J. H. Hale, already mentioned, speaks of this in "American Gardening," last issue, as follows: "Splendid, which is a somewhat old variety of the Crescent type, is a perfect-flowering variety that has rough-and-ready habits of growth that make it valuable to a great variety of soils. It is tremendously productive, fruit only medium size, light scarlet color, very firm and fairly good quality." This strawberry is about as prolific a plant-maker as I know of. One row, all ready for the third year's fruiting, was narrowed down to almost a single line of plants, the runners being removed and kept so until fruiting. The other row was allowed to spread and form a mat up to three feet and more in width. The difference in size of the individual berries, between the one row and the other, was striking during the entire season. While the wide row, although a newer bed, gave us the berries of good medium size (as spoken of by Mr. Hale), the narrow row gave us very large berries from start to finish. It was much easier picking, too; and I have made up my mind to restrict the plant-making tendencies of the Splendid hereafter much more thoroughly than I usually have done, and never allow more than a narrow matted row.

* * *

The Cuthbert raspberries on my highly manured and mulch-covered soil have for the past few years made a wonderful growth of cane. I had to keep cutting the young plants down in order to confine them to narrow rows, and to nip the new canes in the rows back severely in order to have fruit that one could pick without the use of a step-ladder. The rows are six feet apart, and yet the tops would meet across these spaces. The crop of berries last season was enormous. I counted up nearly four hundred quarts as the season's product of three rows not over one hundred feet long, a yield at the rate of over four hundred bushels to the acre, and worth, at the price at which I sold my surplus (eight cents a quart), over one thousand dollars an acre. Last winter was rather severe on the plantation. In fact, this spring but very few of the plants appeared to show even a sign of life, and I was afraid the whole patch would not give us berries enough for our own use. But the few canes that were left made a strong growth, and at the present time we are picking a reasonable quantity of fruit, and the individual berries seem to be nearly twice as large as they were last year. They were not small even then.

* * *

I am having a similar experience with my gooseberries. Two rows of various varieties have been standing in an apple orchard where a few years ago they received a mulch of coarse manure heavy enough to choke out all weed growth for a time. The growth of wood for some years was wonderful. So was that of currants in the same rows and under the same circumstances. The berries also grew much larger. But after that the patch was neglected; weeds sprang up and were allowed to grow for awhile, and the excess of wood growth was not always as promptly removed as it should have been. The result was and is a decided decrease of the berries in size. The same is the case with my Columbus gooseberries. The bushes were again severely pruned last spring, half or possibly two thirds of the new growth being cut out. This, in fact, amounted to a severe thinning of the fruit. As the roots, however, have an adundance of plant-food, and the heavy mulch provides a never-failing supply of moisture even in the driest weather, the plants must expend their energy in some direction, and the consequence is not only the less desirable one of an excessive growth of new canes (which I try to restrict), but also of most vigorous development of foliage in spite of worms, and especially a most remarkable size of the individual berries. It is a pleasure to show visitors this sight of fruit, and all tell me this year that they have never laid their eyes on gooseberries of such mammoth size. Yet the bushes have plenty of old wood left, and the canes in places are bent down to the ground under the weight of the fruit. The berries are largest, however, where least in number.

* * *

Rain and Rest.—The recent rains have been abundant and most welcome. Yet nothing can be much farther from the truth than the old saying, "More rain, more rest." I find it quite the reverse; namely, "More rain, more strain." I had a good lot of hay out, and after the rain it needed tedding, pitching over, etc., and made me a lot of extra work. But that is the least. The rain makes the weeds spring up all over, and turns the patches where cultivation had already been too long neglected on account of pressing work in the hay-field into veritable meadows. It calls for prompt action in setting out cabbage and celery plants, and sowing new patches of radishes, beets, kohl-rabi, spinach, endive, lettuce, and other things; all jobs that had been put off on account of the excessively dry weather. In short, right after the rain, or as soon after as the soil has returned to proper working order, is the time to put on extra steam. For a few days the soil always works so nicely that it is a pleasure to hoe and cultivate, and at such times I am usually to be found in one or the other of my garden-patches early in the morning, and again as late as I can see at night. We should always try to stir the entire surface of our garden-patches soon after every heavy rain. This will give us the soil mulch that the crops will need during the spell of hot and dry weather which is quite liable to come after the rain. It will kill the thousands of weeds that spring up all over, and it will stimulate plant growth wonderfully. In these days I often regret that darkness drives me out of my garden, and that I cannot keep at it all night. How nice these freshly worked onion-beds and beet and cabbage fields look when attended to in the proper way soon after a rain!

T. Greiner.

IRRIGATED MARKET-GARDEN CROPS

The crops which I have found it the most profitable to irrigate are strawberries, celery and cauliflowers. When the strawberries are to be irrigated I have found it best to plant them in rows two and one half feet apart, and allow sufficient runners to set to make a row of plants sixteen inches wide, leaving a path fourteen inches wide. In this path I run the water when irrigating. I begin to irrigate when the blossoms first appear, and continue until the berries begin to ripen. I have found it poor economy to irrigate strawberries without placing a mulch between the rows. I have had quite a long experience in using water in the garden for irrigation, and I get much better results when I use it in connection with the mulch. Much less water is needed to keep the ground moist, and the surface does not bake when exposed to the sun, as it will if surface-irrigation is practised and it is not covered with a mulch. The strawberry-beds are weeded, and if there is not sufficient material on the ground to mulch the plants well, I mow grass and place between the rows. I use the grass because it is the most convenient, as it grows in a field near by, and because the berries seem to have a better gloss when mulched with the green grass. I am not able to give a good reason for this, but it is a belief which many growers have. The water is poured on the mulch between the rows with the hose. The hose is attached to the iron pipes that bring the water from the tank to the field.

* * *

The water is elevated into the tank from a brook near by with a hydraulic ram. In the tank there is a receptacle for manure covered with wire netting, so the manure will be kept in it and prevented from clogging [illegible] hundred barrels of water. At one end there is an elevated platform for the manure that is used in the tank. Several tons of manure are placed on this platform, and about half a ton is pitched in the tank at one time. In a few days, when the water has carried out the most of the available plant-food, this manure is pitched out, used for mulching, and the supply renewed from the platform. I prefer a mixture of stable manure and poultry manure for using in the tank to make manure-water for the plants. In applying the water care is taken to run it between the rows, and not allow it to come in contact with the foliage of the plants. After the water is applied one can see the foliage change to a dark green, which is followed by a larger growth of plant and fruit. This kind of irrigation is to be preferred where the berries are grown for a near-by market, for too much water will make the berries too soft for shipping to a distant market.

The plan of irrigating celery is much the same. The plants are set in double rows, so there is alternate spaces between the rows of twelve and eighteen inches. When the plants are one foot high or more the blanching-boards are set up, boarding the two rows together that are one foot apart, so the two rows are between the boards. The eighteen-inch space is then mulched with manure or other material, and the water is poured on the mulch with the hose. This mulch between the rows of celery is one of the essentials to success where close planting and irrigation is practised. Irrigation causes the formation of roots close to the surface of the ground, and the mulch keeps the roots moist and cool. By mulching and irrigating as described the crop is more than doubled, and the rapid growth makes the celery of better quality.

* * *

The plan of irrigating cauliflowers is the same as with strawberries. Just before the time of heading a mulch is placed between the rows and the manure-water from the tank poured on the mulch. Cauliflowers are not always a sure crop. The time of heading may come during hot, dry weather, and if because of the drought, the growth is checked, the plants may form only "buttons" instead of the large white heads we desire. When irrigation is practised. with right management a crop is insured in spite of the conditions of the weather.

Another vegetable that I grow for market is winter squashes. I prepare the ground for planting by placing well-rotted manure in the hills, and plant about the time I plant corn. The hills are about six feet apart each way. Before the vines begin to run over the ground I cover the whole surface of the ground with a mulch, and then apply the manure-water around the hills in the same way as with the other crops mentioned. Very large crops of squashes can be grown in this way, and winter squashes are profitable if good crops can be grown.

The other crops which we sometimes find it profitable to irrigate are the raspberries and blackberries. A drought very often occurs when these are ripening, which is very injurious to the crops.

* * *

Mulching and irrigating make the crops nearly a certainty every year. One may have the facilities for irrigating his crops, but unless he has learned how to rightly use the water he may fail to get the full benefits from it. From quite a long experience with the use of the water in the market-garden I have learned that much better results are obtained by using the mulch in connection with irrigation, and if this is not possible, the next best thing is to follow the irrigation with cultivation as soon as the ground is sufficiently dry. It is only by having water at hand available for irrigation that maximum crops can be grown, for a drought may occur at any time during their growing season that will shorten the crops.

W. H. Jenkins.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

THE BUFFALO TREE-HOPPER

The buffalo tree-hopper has done much injury to young orchards and other trees during the past few years, and the several inquiries sent into this office suggest this article. Ordinarily the insect is not seen, but peculiar scars are found in the bark which give the twigs a battered appearance. (See Fig. 1.) The injury is done by the insect, as shown by Fig. 2. It is a curious-looking [illegible] eggs in the bark. [illegible] ing the juices of the plant, so no poison is

Fig. 1

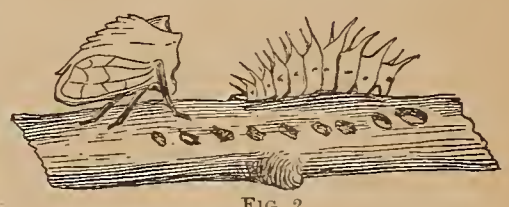


Fig. 2

effective; but in sucking the sap they are not seriously injurious. The worst harm they do is in cutting the slits in the bark, in the doing of which they seem to poison the wood so it does not heal readily. They seldom cause any harm to large trees, but young trees may be seriously injured by them. The remedies are the removal of the eggs and by jarring the insects onto oiled sheets. The mature insect is about one third of an inch long, green in color, with brown dots. It is very shy, and quickly jumps away if frightened.

INQUIRIES ANSWERED

Grape Wine and Vinegar.—N. T., Madisonville, La. The making of good wine is such a complicated matter that you should get some good work on the subject if you propose making wine. The Bushberg catalogue is the best treatise on the grape that I know of. It can be had of Bush & Son, and Meissner, of Bushberg, Missouri, for fifty cents. Besides being a fine treatise on the grape it gives a most excellent chapter on wine-making. The making of vinegar from wine is a very simple process. After the grapes are crushed the whole mass is allowed to ferment outdoors until it becomes very sour. The juice is then pressed out and stored in clean vats or barrels with the bungs left out and the fermentation allowed to proceed to the end. During the process care should be taken to keep out insects and dirt and to use clean barrels that have no bad taste to them. Whisky, alcohol and vinegar barrels are good for this purpose. If the grapes contain much sugar the vinegar will be sour; if they are immature or for other reasons lack sugar the vinegar will be "flat." Of late years there has been an increasing demand for unfermenting grape-juice. This is made by crushing the grapes after they have been picked off the stems and then bringing the whole mass just to the boiling-point several times and finally bottling while hot. If properly done, it keeps well and there is a good market for it.

THE POULTRY-YARD

Conducted by P. H. JACOBS

HAMMONTON, NEW JERSEY

BREEDS AND FEED

A PRODUCING fowl must necessarily be one with a good appetite. The large birds are heavy feeders, which is natural, as large birds require more food than those that are smaller. They also have a tendency to fatten very readily, and when once they become fat they remain so on a limited supply of food. This is due to their inactive habits. Being of a quiet disposition and preferring to range only on a small area, and unable to fly over a fence a yard high, they differ greatly from all other breeds, not only in appearance, but in disposition. Because a bird is quiet, fattens rapidly and is always willing to be fed rather than to seek its food is no reason why it should be fed several times a day on all the food that it can consume. Active birds when on a range really eat more than may be supposed, as they pick up considerable; but as exercise keeps them in condition they do not fatten as quickly as less active breeds. The cochin becomes exceedingly fat and remains so, in which condition it lays but few eggs, and is then classed as an indifferent layer, when in reality it is one of the best all-around breeds known, and would easily demonstrate that fact if more judgment was exercised in its management by the poultryman. It must be kept in view that all breeds which fatten readily should have but little grain, while the active breeds may be fed more liberally. Because the Cochin is a heavy feeder is no reason for making the food mostly of fat-forming materials. If it is allowed more animal food and green or bulky materials it will lay more than the average number of eggs, and will not always be ready to sit. For hardiness the Cochin is unexcelled, and it is easily kept where some other breeds cannot be used.

DISTINGUISHING SICK FOWLS

When a bird is sick the comb and wattles usually change color, no matter what the ailment may be, for which reason the comb and wattles are the parts of the fowl to examine in case of sickness. In health they should be of a bright scarlet color. When the comb looks white or pale or black something is wrong; even lice will cause the comb to change color to a certain extent. When there is a refusal of food the birds are out of condition, as no healthy fowl will refuse to eat if fed on a variety of food, unless already full. Thirst to a great degree is another sign; and a nervous, uneasy look is a warning. A sick bird often drinks to excess, especially when attacked by cholera; but again at other times it refuses both food and drink. Sometimes a hen will be moping about with drooping wings, showing no other signs of sickness. Whenever the comb, however, does not show a bright scarlet, and the fowl is not lively, it should be examined and treated immediately. Delay is dangerous to the fowl, for sickness in a flock is hard to eradicate if not driven off early. A fowl may suffer for want of certain food which it cannot get in confinement, and unless gratified will show signs of sickness. For this reason a change of food often will effect a cure.

LEG-WEAKNESS

Now that the young roosters are running at large they will grow rapidly if properly fed, but should the weather become damp they may suddenly show weakness in the legs. If they eat and seem well otherwise they will soon come in proper condition, as the weakness is caused by the birds growing in height rather than in breadth, the legs seeming to grow longer. Such birds show the effects more on a sudden change of the weather than at any other time, as if rheumatic. Keep them in a dry place, feed plenty of bone-meal, and they will not only easily get over it, but will eventually be the largest ones in the flock.

SOFT FOOD

Soft food should be of the proper consistency. If too soft and sticky the birds will not readily partake of it. Soft food is not natural food for fowls under any circumstances, but it affords an excellent mode for giving them many substances which they will not partake of in any other form. The proper mode is to thoroughly mix the ingredients dry, and then add only enough milk or water to adhere the substances in a somewhat crumbly state, so that the birds can pick up portions without having their bills plastered up. By watching them after eating soft food they will be frequently observed wiping and cleaning their bills. Feed soft food as dry as possible.

LAYERS AND MARKET FOWLS

Bear in mind that if you attempt to fatten some of the hens for market you must remove those intended to be retained as layers, or the laying hens will become useless. More loss occurs from overfeeding than from insufficient food, and the result is due to a failure to recognize the fact that a laying hen requires different food and care from one intended for market.

NOTES FROM CORRESPONDENCE

CURE FOR GAPES.—I take the following from an encyclopedia, which might be worth trying: "Draw a blight-feather from the wing and insert it about one and one half inches in the windpipe; turn it gently three or four times with the finger and thumb; withdraw (turning), when you will extract perhaps three small worms. Once a day is generally sufficient." This is an old and successful plan. The cause of gapes is these worms in the windpipe, and if this operation is rightly performed it never fails to effect a cure. The quill may be trimmed so as to form at the end a slim brush about an inch long, then passed down the windpipe and twisted around as you withdraw it. Another method is to insert a loop of horsehair into the windpipe, twist it around and draw out to loosen the worms. The opening to a chicken's windpipe is a slit through the tongue. The following restorative is excellent: Take one half a sulphuric acid; dissolve together; when dissolved put two gallons of spring-water to the iron and acid, then let it stand twelve or fourteen days, when it is then fit for use. The dose for chickens is one teaspoonful to one pint of water for them to drink; give twice a week, or even thrice, and there will be no gapes. Half a teaspoonful of ground black pepper for a grown hen, the dose diminished according to the age, has been considered a remedy. Ashes also have been recommended. Put the chickens into a barrel, have a bag of coarse cloth holding a quart or two half full of dry ashes, and shake it in the barrel until the barrel is filled with the dust, repeating it two or three times in the course of an hour. It is also said that a small piece of asafetida will cure it, and that a little in their drinking-water occasionally will prevent it. Dough raised with milk-rising is recommended as a sure and safe remedy, fed while fermenting but while still sweet. To cook their meal and give but little for several days after they are hatched is said to prevent it. Feed little or more on corn-dough, but feed plentifully on cheese made of clabber. Crumbs of wheat-bread and corn-bread are claimed to be a perfect remedy. The following has been recommended: Cracked corn (chicken feed) four quarts; four quarts of coarse wheat-bran. Scald the meal and bran at the same time; add two tablespoonfuls of good wood-ashes, sifted, also one tablespoonful of best ground black pepper. Mix, and feed once every three hours to chickens and turkeys alike. A teaspoonful of cayenne pepper mixed with a saucerful of Indian-meal and water for one or two dozen chickens is said to be a cure. For young turkeys I have heard a few drops of sweet or lamp oil recommended, to be followed with a strong solution of alum. Mr. Berger stated before the New York Farmers' Club that the common cause of this very fatal disease is the feeding of chickens with fresbly wetted Indian-meal, the meal swelling in the stomach. When this food is given to chickens the meal should be mixed with the water several hours before it is eaten. Some one has suggested that a dough made by mixing Indian-meal with wine will cure this disease.

Maccleney, Fla. D. E. P.

A RAT-PROOF POULTRY-HOUSE.—I will give a little of my experience in raising poultry. In March, 1869, I with my wife and children moved from Cincinnati, Ohio, to Rock Castle county, Ky. I thought this a good country for poultry-raising, as it would not interfere with my other business. The first year I commenced very moderately with turkeys, chickens and ducks. I made a success in the turkey and duck raising, but the chickens were nearly a failure, on account of gapes, rats, hawks and other pests. Those troubles did not interfere with either turkeys or ducks, as they did not roost or stay with the chickens, so I had good success with those. I made a rat-proof coop twelve feet long and six feet wide, as follows: Put four posts in the ground, one at each corner; then spike on a two-by-four-inch piece twelve feet long on each side, one on the inside of the posts about two feet from the ground; then nail the floor to them and side up each side and end above the floor as high as you want it; but have one side a foot or more higher than the other, to give slope to the roof; saw off the posts above the siding and nail on the roof; take tin six or eight inches wide, wrap around each post near the floor, and tack fast with small nails. This prevents rats and other small animals from climbing the posts. Now make a door in one end, two feet wide by three feet high; use a window-sash for the door, so that a small person can get in and sweep out the house, and to make a runway for the chickens to go up to the coop. Make it two feet wide by six feet long. It should be made of light boards by nailing battens on one side; one end of this runway is placed up at the door of the coop and the other end on the ground; it is quite steep, but the chicks run up easily. Ventilation should be on the high side, and there should be a window at the back end. When hens hatch out and take care of their chickens it is a good plan to shut them in such a coop as this when they are quite young, as they will be easier to drive in there. Never catch the hen and chicks and put them into the coop, but always drive them in, and they will soon learn to go in without driving; when they are all in take down the runway and close the door. To prevent young chicks from having gapes is to keep them up in a coop like the one mentioned above, or some other dry, comfortable place, until the grass and weeds are all dried off in the morning. Feed the chicks in the coops in the morning. I use a V-shaped trough made of narrow, thin strips about as wide as a common lath nearly the length of the coop. This is put on little brackets made to fit the trough, and place a screen over the trough to prevent the hens eating the food. The next important thing is the food. When chicks are hatched the first four days I feed them on hard-boiled eggs chopped fine, then use bolted corn-meal and wheat-bran, equal parts by measure, mixed with hot water. Do not leave the food any longer than they are through eating; feed about five times a day, and keep plenty of water and coarse sand where they will get it. When they are four or five weeks old feed them on corn-chops and wheat-bran, equal parts. When chickens are confined to a small pen they must have a mess of cut clover or green food of some description. I use blue-grass cut from my lawn with a lawn-mower, dried. This I scald as I do cut clover, for all the fowls. It is easy to take care of, and the fowls keep thrifty and lay fine through the winter. I have a warm heu-house and an open shed facing the south; it is close and snug, except on the south. I place roosts in this shed and close the hen-house in warm weather, so that the hens must roost under the open shed in summer. My hens keep very thrifty and have laid eggs all [illegible] any person in the neighborhood. J. G. D.

Lawrence, Kan.

INQUIRIES ANSWERED

Late Pullets.—F. E. R., Egg Harbor, N. J., writes: "If Hamburg pullets have been hatched as late as July, will they lay in November?"

REPLY:—They will not lay before next spring, as the period for growth and maturity is too short.

Table-fowls.—J. S., Lima, Ohio, writes: "Which of the breeds would you suggest for my own use only, for the table, without regard to laying qualities?"

REPLY:—The colored Dorking or a cross of Indian Game male with Dorking hens.

Ducks Dying.—E. D. E., Indian Fields, Ky., writes: "My ducks are dying. They seem to lose the use of their legs and lay flat on the ground. I feed corn-meal dough three times a day."

REPLY:—You are probably overfeeding them, especially on corn-meal, as they require no concentrated food during the warm season. Turn them on grass and allow no other food.

Preserving Eggs.—M. E. L., Beatrice, Neb., writes: "Please give a good method for preserving eggs for winter."

REPLY:—Observe the following rules: 1. Use no eggs except from hens or pullets not with males, as such eggs will keep three times as long as those containing the germs of chicks. 2. Place them on racks or in boxes. 3. Turn them twice a week. 4. Keep in a cool place, not over sixty degrees or under forty. Limed eggs, or those kept in solution, cannot be sold as "fresh," as they are easily detected.

Redcaps.—R. S. L., Franks, Ill., writes: "Can you inform me about the Redcap poultry? Do Redcaps ever sit, and are they as good layers as the Plymouth Rocks? Where could I find a market for them this fall or next spring?"

REPLY:—The Redcaps are classed among the Hamburg family, are non-sitters and are prolific layers. The objection to them is their very large combs and lack or hardiness compared with the American breeds. The only market for them is to advertise them for sale. They are beautiful in color and are favorites with many.

Swollen Eyes.—J. T. B., Joliet, Ill., writes: "I have a Plymouth Rock hen which has laid and been in good health until now, but she has one eye closed and swollen. Can you tell me what to do with her so as to save her? I killed one not long ago afflicted the same way, and I would like to know if there is a cure."

REPLY:—Such cases are usually due to drafts from overhead, but it is believed by many that it may occur in particular families more than in others, there being in such a greater susceptibility to the disease, which is really a mild form of roup, inherent and latent in the birds. Camphorated vaseline, used as an ointment, is an excellent application.

WOULD-BE SAN JOSE SCALES

[CONTINUED FROM FOURTH PAGE]

used against other scale-insects will prove of bnt little value against them. Such washes should be used, however, against the young insects upon their hatching from the eggs, as they are easily killed at that time, not settling for some little time after hatching; and even after the scale has commenced to form it is not very dense at first. Kerosene emulsion diluted with ten parts of water, or whale-oil soap should be applied to infested trees early in June, and if done thoroughly one, or at most two, sprayings will be sufficient to effectually reduce these scales.

The eggs of the common angular-winged katydid are also frequently mistaken for scales, though they are much larger and thicker. They are of a dark ashy color, and are laid along the small twigs and ou the edges of the leaves of various trees and shrubs in a very characteristic manner, as shown by the illustration. These insects do but little damage in the North, and therefore need but little consideration by farmers iu that section. In Florida, however, they have been known to do serious damage to orange foliage. They may then be kept in check by spraying the foliage with an arsenite, or by collecting the eggs in winter and keeping them confined in a box covered with netting so that the parasites which emerge from them may escape and continne their good work, as there are a number of parasites which destroy a great many of the katydid eggs.

E. Dwight Sanderson.

GOOD FURROWS

No amount of harrowing or after work can entirely overcome the effects of bad plowing to begin with. Plowing is the foundation of the crop to follow. A man who can drop a straight furrow is one who keeps pretty close watch of his plow. He may hold his handles loosely and appear to be plowing very easily and perhaps carelessly, but he is watching every movement of his plow and shifting the handles slightly one way or the other that the plow may take more or less land. The plow, of course, should do the plowing itself, without necessity for the plowman to bear down on it with all his weight, nor to raise it up on its point constantly; but nevertheless, plowing needs close attention. Intelligent selection should be made of the team which is to plow together. The horses' gaits should be even, and they should work well in span. It is impossible to do good work with one horse walking rapidly and the other lagging behind constantly, or walking sometimes in and sometimes out of the furrow. The plow itself is another thing to consider. No one plow is best suited to all kinds of land. A sharply curved, short, high mold-board will throw the furrow very high and hard and break it up; this is suitable for a stiff clay soil. For smooth, mellow soil, or for plowing sod in the spring, when it is desired to turn the furrow squarely over, a plow with a long, slightly curved mold-board is best, as it turns the furrow smoothly upside down and breaks the furrow the least. The harrowing can be done without dragging out the grass. The Scotch farmers want a plow which will turn their furrows on edge, and not entirely over, and they plow a narrower furrow than American farmers. If the beam of the plow is short, bringing the horses near to the point of resistance, the draft will be least; but there should be several links between the beam and the whiffletree, to allow the horses some leeway when stepping on a mound or into a depression, so that the point of the plow may not be jerked up or down.

Guy E. Mitchell.

LATE CULTIVATION OF BLACKBERRIES

Blackberry-growers realize that the blackberry is a strong-growing plant, and that it therefore demands large quantities of water. They seek to supply this by thorough plowing and fining of the soil to a depth of often twenty inches. Ground so prepared will hold moisture well, especially when given proper surface-cultivation. It is, however, a common and serious mistake to discontinue cultivation as soon as picking is over. The ground has then been tramped hard by the pickers, and evaporation is consequently very rapid. In this dried-out soil the plants quickly ripen up their wood, and when the autumn rains come this prematurely ripened wood frequently starts into growth, which, if it attains any size, fails to ripen on account of lack of time to mature. But usually the growth is confined to a swelling of the buds, which, like the sappy canes, are unable to withstand even an ordinary winter. It is probably owing to this bad treatment that some of the charges of tenderness in the blackberry have arisen. In order to prevent this trouble the ground should be given several cultivations after the berry season is over.

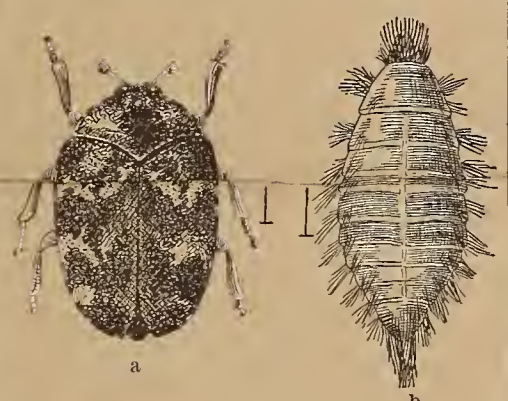
M. G. Kains.

CARPET-BEETLES

During the summer, the autumn, and also in well-heated houses throughout the year, an active brown larva a quarter of an inch long and covered with stiff hairs may be found in carpets and other woollen goods. He works from underneath, generally following the cracks in the floor, but sometimes eating out irregular holes elsewhere about the house.

The full-grown insect is a tiny black-and-white marbled beetle with a red stripe down the back, and always "plays possum" when disturbed. The beetles appear in greatest number in the autumn, soon lay their eggs, which, if conditions are favorable, hatch in a few days, and the larvae, if provided with plenty of food, grow rapidly. If food be scarce, however, they do not necessarily die, more's the pity. They can live for an incredible time upon their own skins which they cast off from time to time. In Europe, from which these creatures originally came, they are not especially troublesome in carpets because these are not used there extensively. And in this country where polished floors are laid, or where rugs, mattings and the like are taken up frequently and beaten, they have little chance to destroy. But where carpets are down for long periods they devastate.

It is no easy matter to control this pest. Only thorough war can conquer it when once it has become established in the house. An annual house-cleaning won't do. One, or at most two, rooms should be cleaned at a time and the work perfectly done. The carpets should be removed, beaten and sprayed thoroughly with benzine, to kill the insects.



A, adult; b, larva (After Riley)

The room must be thoroughly swept and dusted, and the dust, etc., burned. The floor should be mopped and washed with hot water, care being taken to reach all cracks. Squirting benzine into cracks around the baseboards and in the floors should also be done. If cracks in the floor be large they may be filled with liquid plaster of Paris, which will solidify. Laying tarred paper under the carpet is good, especially around the edges of the room. If the carpet must be laid at once, have it well aired to get rid of the benzine odor, and tack it loosely so that it may be raised without difficulty for examination. If beetles or larvae be found, lay damp cloths in the suspected places and apply hot sad-irons. Persistence in these rigorous measures is the only hope when once the creatures have taken possession. They seldom appear where carpets are not used.

M. G. Kains.

EXTRACTS FROM CORRESPONDENCE

From Florida.—It can truthfully be said of Florida that she gives ten months of growth and production, and the two remaining months can hardly be termed winter. It can also be claimed for Florida that nowhere within the United States can a home be built up for less money than here. It is safe to say that $300 will put up a comfortable home for a family and within range of both school and church. Alachua county, Florida, is a productive county. The grains, except wheat, can be successfully grown here; so, also, can vegetables, both Irish and sweet potatoes, and in the fruit line everything that is desired except apples and currants. Strawberries do extremely well here, and have a season from January until July. The cost of wood or coal for a winter month in the North will buy wood here for a year. The undersigned, an ex-soldier and a pensioner, is now living cheaper in Florida than he did in Michigan, Indiana, Illinois, Iowa or California. The reader will bear in mind that Florida can be classed with the other states in point of making money; money can be made here, but it is not an exception, and, like other states, it requires money to make it, the amount of capital depending upon the business engaged in.

G. Y.

Gainesville, Fla.

QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Asparagus-tops.—S. A. J., Omaha, Neb., writes: "Ought the tops of asparagus he cut off after frost nips them?"

REPLY:—Asparagus-tops should he cut and removed before they drop their seed. For winter protection use coarse litter. In the spring apply a top-dressing of good compost.

Plant-lice on Peas.—T. S. M., Chester county, Pa. Plant-lice are liable to attack many of our cultivated plants, cahhages, cauliflowers, peas, as also many of our hush and tree fruits. In one year they may he ahundant and destructive, in another entirely absent. No use giving up any crop hecause it was affected with plant-lice one year. The chief remedy recommended for all species of plant-lice is the kerosene emulsion applied in a forcihle spray. Strong tohacco-tea used in the same way is also uniformly effective. We prefer to make the kerosene emulsion with whale-oil soap.

Fertilizers Needed—Clover After Corn.—J. E., Americus, Kan., writes: "Please let me know if there is any way a common farmer can tell what his soil needs as a fertilizer.——Would it he a good plan to sow clover or peas in the corn this fall? Is crimson clover good for feed?"

REPLY:—The way to find out what fertilizers your soil needs is hy experiment. Your experiment station, Manhattan, Kansas, can help you. ——When weather conditions are favorahle a good stand of common red or crimson clover can he ohtained hy sowing in the corn. Crimson clover is good for feed for cattle, but of more value as a winter cover and soil-improver crop to be plowed under in the spring.

Onion-maggots.—C. M. T., Metamora, Mich., writes: "I have three acres of onions which were promising a large crop, but the maggots have commenced on them, and it looks now as if there would not be an onion left in two weeks. Can you tell me of anything I can do to save them? Would originate and what can he done to prevent them for another year."

REPLY BY T. GREINER:—The parent of the onion-maggot is a fly, somewhat resembling a house-fly, which deposits its eggs on the onion-stalk near the ground. Plenty of fresh lime in the ground is objectionahle to the maggot, but perhaps not an infallihle remedy. I know of no way in which the fly can be prevented from depositing its eggs on the onion-plant. I have seldom suffered serious injury from this source, although I have lost an occasional onion by it in many years. You should go over the patch frequently and gather up and destroy every affected plant, thus destroying the maggot with it and preventing mischief for the future.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Scrotal Hernia.—G. W. S., Swoop, Va. I advise you to have your colt with the large scrotal hernia castrated with "covered" testicle and with clamps as soon as old enough, say either next fall or next spring. Every competent veterinarian knows how to perform the operation.

Anasarca.—W. J. C., Webster, W. Va. What you describe is evidently a case of anasarca, or subcutaneous dropsy. It is usually an attendant of ascites, or general dropsy, after the large cavities of the body, particularly the abdominal cavity, have become filled up, and therefore, as a rule, denotes the last, or fatal, stage of the disease that caused the dropsical effusions.

Warts.—R. D., Santa Fe, Kan. Please consult what has been said in the answer to L. S. B., Arkadelphia, Ark., in FARM AND FIRESIDE of July 15th, because it applies just as well to warts on cattle as to warts on horses. If the warts of your animals are pedunculated (have a neck) it may he best to remove them by means of ligatures. See numerous answers about warts in recent numbers.

Swellings Beneath the Skin of a Calf.—S. V. M., Sligo, Pa. According to your description, which, as far as it goes, is a fair one, it appears probable that your opinion that the lymphatic glands constitute the seat of the swellings is correct, and I regard it also as probable that an examination of the animal and an investigation of the case would soon reveal the cause and the real nature of the swellings, hut without knowing any more of the case than what you say about the size, shape, density, movahleness and location of the swellings I will not risk a diagnosis, and only advise you to subject the calf, and perhaps also some or all of your other cattle, to the tuberculin test, which will neither be difficult nor very expensive in your state.

Produced Dead Calves.—G. T., Hutton House, Can. There is nothing in your hrief communication that gives as much as a hint of what may have caused the calves to die before they were horn, and there are too many possihilities to form an opinion, except that the hran and oats very likely had nothing to do with it. If a calf is expelled within six or seven months after conception it is called an abortion; and if it is expelled later, after it has become coated with hair, but before it has arrived at maturity, it is called a premature hirth. The distinction is this: An aborted calf cannot live; hut in a premature hirth the calf, if horn alive, may possihly be kept alive hy good care and superior nursing.

Agalactia and Bloody Milk—Young Calves Dying.—J. F. M., Tillamook, Oregon. Agalactia, or failure to produce milk, and also loss of appetite are a necessary consequence of nearly every disease in which the process of nutrition is seriously interfered with; consequently, as you give no other symptoms, it is utterly impossihle to name the disease your cow is affected with. Examine your cow more closely, and report again. Concerning the cows giving bloody milk, consult answer given to B. T. H., Perry, Iowa, in the present issue.——As to your young calves that are dying, make a post-mortem examination of one of them, and then give a good description of all the symptoms observed during life and of the morhid changes found after death, and then I may he able to tell you what causes them to die.

A Lame Horse.—C. H. T., North Randolph, Vt. If your horse has been lame for four or five years, the prospect of removing the lameness is exceedingly slim. A splint—that is, an exostosis on the median splint or small metacarpal hone—does not cause any lameness, except, perhaps, in the beginning and for a short time. It is entirely different if the exostosis is on the lower part of the carpal, or knee-joint, for then the morbid changes, as a rule, extend to the articular surfaces of the hones constituting said joint. If the morhid changes are not extensive, and limited to the articular surfaces of the lower bones, the case is somewhat analogous to spavin, and a possibility of removing the lameness may not he excluded; hut where the morhid changes are extensive, extending to the articular surfaces of the upper rows of hones, or of long standing, as in your had one.

Sore Foot.—E. S. H., Normandy, Tenn. The sore on your cow's foot I suppose is in the cleft between the hoofs, and if so, there is very likely some loosened horn which must be removed—he cut away with a sharp hoof-knife—before any healing can he effected. If the sore is on a fore foot this is easy; but if it is on a hind foot you may find it difficult, and unless the cow is very gentle you may he compelled to throw her to get at it, for most cows very much object to having a hind foot lifted up. After all the loose horn has been removed and the sore heen thoroughly cleaned, moisten some ahsorhent cotton with a mixture of liquor plumhi suhacetatis, one part, and of olive-oil, three parts, and press it into the sore between the hoofs. You may find it necessary to apply a bandage to keep the cotton where you put it. This dressing must he renewed at least once, or hetter, twice a day. If this is done the sore will soon heal. That the cow during the treatment must be kept on a dry and clean floor, or at any rate, in a dry and clean place, is self-evident.

Garget.—T. E. M., Tenino, Wash. You ask for the cause and the treatment of garget. The cause is a twofold one; namely, a predisposing and an exciting one. The former consists in insufficient milking—insufficient either in thoroughness or in frequency—and the exciting one in an infection of the milk retained in the udder hy the insufficient milking with certain bacteria, which act upon the sugar of milk and convert the same into lactic acid and thus cause the casein of the milk to separate (precipitate) out of its solution or to change the casein from its fluid state to a solid one known as curd. This curd, heing solid, unless removed by vigorous and frequent milking, will remain in the udder, and heing full of hacteria, will spread the infection within to the unaffected milk as soon as produced. As a necessary consequence the affected quarter or quarters will hecome congested, swelled and inflamed, and the seerction of new milk will he more and more diminisbed until it entirely ceases. The remedy therefore consists in removing the coagulated milk (the curd and the bacteria contained) as soon as it can be done. As this can be done without permanent injury to the udder only by vigorous and often-repeated milking, the latter, as has been explained time and again in these columns, constitutes the remedy, but it must be applied before the production of milk has entirely ceased.

Chronic Founder.—E. B. C., Hesseltine, Wash. Any somewhat severe case of founder or laminitis that does not come to treatment within three days after the first symptoms made their appearance must be considered as incurable, as far as a restoration to a normal condition is concerned, because three days are sufficient for the production of irreparable morbid changes. This, of course, does not apply to very mild attacks, which usually disappear in about three days without any treatment if otherwise the conditions are favorable. You do not state of how long standing the disease was when you wrote two weeks ago, hut supposing that the disease had just made its appearance, it will he of four to five weeks' standing when this reaches you, and any treatment for the purpose of restoring a normal condition will be in vain. All you can do will be to reduce the pain the horse is suffering hy proper shoeing. In such foundered horses the frog is usually strong and healthy, but the sole is flat, or even convex, and very sensitive to pressure; hesides this, the union between sole and wall and the latter itself are weak, too weak to support the weight of the animal, therefore shoes have to he put on which protect the sensitive sole against injury and pressure, and relieve the wall of a great deal of the weight it has to carry by throwing it upon the strong and healthy frog. Consequently what is required is a har-shoe with a very hroad web—hroad enough to protect a large portion of the sole, and concave enough on its upper surface inside of the nail-holes not to come in any way in contact with the sole. Outside of the nail-holes the upper surface, of course, must he perfectly level. With such shoes properly fitted and put on even a badly foundered horse can do a great deal of work on a farm, hut must not he used on hard or paved roads or on the streets of a city.

Lame—Farcy (?).—J. B. R., Hanford, Mich. The pointing of your horse with the lame fore foot indicates, not with absolute certainty, hut with prohability, that the lameness is caused hy a morhid affection of the suspensory ligament (also called the flexor tendon of the pastern), and perhaps also of the flexor tendons of the coronet (perforatus) and of the hoof (perforans), originally produced by overexertion or overstraining. The fact that the lameness, according to your statement, increases when the horse has to work, and decreases when the same is at rest, indicates the same thing. If the lameness is of long standing and the case an inveterate one, the prospect of permanently removing the same is rather slim; but if it is not, the following treatment will effect a cure. First give the animal strict rest and exempt the same from all kinds of work, then lower, hy paring, the toe-part of the hoof for the purpose of throwing more weight upon the hones and of relieving the flexor tendons as much as possihle, and apply to the skin covering the flexor tendons, from two inches below the hent of the knee to two inches above the fetlock, a good counterirritant. Oil of cantharides, prepared by heating one part of the cantharides and four parts of olive-oil for one hour in a water-hath, and then strained through a piece of muslin or flannel, will answer if rubbed in once a week for two or three weeks in succession. The rest of the animal, however, must not he interrupted until every trace of the lameness has disappeared, and then the work for the first month or two must be very light, because if not a relapse is sure to follow. ——What you call "hutton-farcey," a term signifying external glanders, a very contagious and fatal disease, which can also he communicated to human beings, is prohably nothing but a case of prurigo, an itching skin-disease, which, though in some cases very ohstinate, usually yields to treatment. First wash the sores and pimples with soap and warm water, and see to it that the stall occupied by the horse, if in the stahle, is kept clean, and that the horse does not get into muddy places if kept outdoors. After the sores have been thoroughly cleaned, apply to the sores and pimples once a day a mixture composed of suhacetate of lead, one part, and of olive-oil, three parts. Then after a healing has been effected, see to it that the horse is well groomed, particularly in all such places at which sun and moon don't shine.

Bloody Milk—Partial Paralysis in Pigs.—B. T. H., Perry, Iowa. Bloody milk, as has been repeatedly stated in these columns, may he produced hy various different causes, only one of which is excluded by your statement that the cow, which (recently) had her fourth calf, never had her udder bruised or injured. As the various causes coming into consideration in your case I will mention: (1) A physiological congestion of the mammary glands, prohably attended with the rupture of a few capillaries, soon after calving. The discharge of milk caused in this way usually continues about two weeks and then disappears. (2) A similar congestion of the mammary glands sometimes making its appearance in consequence of the cow being in heat. In this case the discharge of the bloody milk is apt to he periodical, and disappears after the cow has conceived again. (3) Irritation caused by a consumption of suhstances containing turpentine. In this case the discharge of blood-colored milk is attended with other morhid symptoms, such as severe digestive disorders, hemoglobinuria, etc., consequently out of the question in your case, because these other symptoms could not have escaped your attention. (4) Certain infectious diseases are sometimes attended with a discharge of hlood, or rather hemoglobin, with the milk, hut then also other symptoms are more conspicuous. (5) A sudden change from very poor or innutritious food to food very rich in nitrogenous compounds, for instance, from straw or poor hay to an abundance of rich clover, is sometimes attended with a production of bloody milk. (6) Tuberculosis of the mammary glands; but then other morbid changes will also make their appearance in the affected quarter, and besides this, it is usually a hind and not a fore quarter that becomes first affected. In all cases the treatment consists in removing the causes, and where that cannot he done a treatment will he of no avail.——As to your other question, concerning the partial paralysis of your young pigs, there are also numerous different causes capable of producing it. All, or at least the principal ones of them, have been repeatedly enumerated in these columns; therefore, if the diet or the food of your sows and pigs is what it ought to be, and does not lack any of the necessary constituents of the animal body, contains sufficient nitrogenous compounds, lime salts and phosphates, and is not too rich in acids, I advise you to have a careful post-mortem examination made of one of them, and thus ascertain the cause.

TOM NORTON'S TRANSFORMATION

By Rosabel Reed

"HERE'S a letter for you, Mr. Norton. Come yesterday noon; p'r'aps you'd like to read it while I'm weighin' out them crackers for you;" and good-natured Jonathan Hatch, who assumed the combined duties of storekeeper and postmaster in the small town of Eastwood, obligingly selected the missive from the revolving column where the mail was alphabetically arranged, and handed it to his customer, remarking, "Looks like a lady's hand."

Mr. Norton examined the address critically, endeavoring to decipher the post-mark without success, and finally tore open the envelop. The letter within was not a long one, but its recipient read and re-read it several times, a variety of emotions, of an uncomfortable nature, finding in turn expression on his thin countenance. He had arisen from the soap-box, which served for a seat, and still holding the letter in his hand, looked around in helpless dismay.

"Hope you haven't got bad news?" half queried the postmaster pro tem.

"Yes; that is—I don't know what to do; my—niece—is coming to visit me; I must prevent it. I haven't any accommodations for a visitor, especially—a stranger; it is out of the question—but I'm afraid 'tis too late."

Mr. Norton ended his disjointed tale of woe with a groan. He was not accustomed to confide his affairs to any one, but this was an extreme case. However, he had little time to consider ways and means out of the perplexing situation ere the low rumble of an approaching train was heard.

"There's the train. What am I to do? And I a poor man!" he cried, incoherently. The engine uttered a derisive shriek as it slackened speed at the station opposite.

"If she's on that train you'll have to meet her and make the best of it, I should say," responded Mr. Hatch, confidential adviser, with exasperating calmness. Candidly he rather enjoyed the discomfiture of the prospective but reluctant host; and he chuckled as he saw Mr. Norton cross the street to the little station.

"He's afraid it'll cost him a few dollars; and everybody knows he wasn't on good terms with his brother for years before he died. Well, he's lived alone so long on that old worn-out farm, with no object in life but to hoard up money, that this must seem a ruther sudden change to him. P'r'aps 'twon't hurt him to loosen his purse-strings a little; mebbe his heart will open at the same time."

Meantime Mr. Norton, letter still in hand, was anxiously watching the few passengers alighting from the train, when suddenly there tripped toward him a bright young girl, with rosy, smiling face, who placed one hand on either shoulder and kissed him heartily; a pair of clear, honest blue eyes looked straight into his own, and a sweet young voice said, "Oh, Uncle Tom! I should have known your face among a thousand, from your picture which my father always kept. I had the advantage of you there, for of course you could not know anything of my appearance; but I hope you are half as glad to see me as I am to meet you." Then noticing the letter in his hand, "Is it possible you have only now received our letter? Well, then I really surprised you. Oh, I nearly forgot my trunk! Won't you please look it up? Here is the check."

Mr. Norton took the bit of metal and moved away, more bewildered than he had ever been before in his rather uneventful life; it was years since any one had kissed this cold, reserved man, and he was entirely unprepared for any demonstration of affection. However, he managed to find the small trunk, which was soon deposited in the somewhat dilapidated carriage, and together with his niece started toward home.

The young girl inhaled deep breaths of the sweet June air, and eagerly drank in the beauties of the country landscape. "It is such a relief to escape from the dust and heat of the cars, and a great treat to me to be in the country after living in the city so long; I do hope, though, I shall not inconvenience you by following so closely upon the letter; it should have reached you sooner, though I had to start rather hastily. You see, Aunt Sarah, my mother's sister, with whom I have lived since papa's death, received news of the serious illness of her only surviving sister and felt she must go to her. She did not wish to take me with her, nor leave me alone at home; so, as papa had expressed during his last illness the earnest desire that his brother and his daughter should know each other, Aunt Sarah thought a visit to you now would be a happy arrangement. I was anxious to carry out papa's wishes, and it seemed to me that the two surviving members of the family should not remain strangers; besides, papa always told me so much about you and his old home that I longed to see both."

"I'm afraid you'll be disappointed; the old farm and I are both nearly worn out"—half grimly, half sadly.

"Nonsense, Uncle Tom. I am sure you only need cheering up a bit." And the sweet young face smiled up into his in such a winsome fashion that an answering smile crept its unaccustomed way about his lips—for smiles were rare on Tom Norton's features.

"I don't see how any one can help being cheerful in this beautiful country neighborhood," the girl continued; "plenty of room, plenty of fresh air and sunshine, grass like velvet to walk upon, flowers and fragrance and bird-songs everywhere! Why, Mother Nature is full of rejoicing and doing her best to make all her children happy. Now, in the city it is different; we have to be happy in spite of the tall, frowning buildings and the crowded quarters and the eager, selfish, jostling spirit which seems somehow to creep into city life. Of course, there are some beautiful things there, but not this natural charm and freedom which I love." And she looked about her in such evident delight that her companion wondered, and remarked:

"I never noticed much about it; perhaps it is because I have been used to it all my life and take it as a matter of course."

"Is it possible? Why, it seems to me, Uncle Tom, people living in the country must naturally be generous and helpful and loving toward each other. If I should do a mean, selfish thing here I think I should feel rebuked by every bird and flower and growing thing, which each gives of its very best for the benefit of all who will enjoy them."

Mr. Norton looked at his niece in amazement, and, it must be confessed, with a feeling akin to guilt; such ideas occupied no place in his philosophy and were not altogether pleasant, viewed from his standpoint. Still, if he imagined any personal allusion he was soon disarmed, for his companion suddenly turned to him with the remark, half smiling, wholly earnest, "You must be a very good man, Uncle Tom. My father has often told me what a brave, generous big brother you were. He told me how, when you were only about ten years of age and he a bit of a fellow, both wandered off into the woods one autumn afternoon in search of chestnuts. You quite forgot the time, in the excitement of the sport, until twilight began to fall; and then when you started to return could not find the way. Both trudged on for awhile, until papa's chubby little legs were too tired to go further and the night fell. You were frightened, but would not own it, and as the air grew chill, took off your jacket to wrap around your little brother, lest he should be cold. Then he fell asleep with his head in your lap as you sat on the ground, leaning against a big tree, determined to keep awake and on guard all night. And there the searching-party found you both toward morning, safe and fast asleep."

Tom Norton said nothing; he was looking very fixedly at the western horizon and seemed to be lost in thought. Whatever his emotions, they found no outward expression. After a moment the girl continued, softly:

"And papa told me, too, how once, when he broke through the ice when skating, you of all the boys kept a clear head and a steady hand and quickly tied together, so as to make a rope, all the long neck-scarfs—comforters, you called them—which the boys wore, and then fastening one end securely to a stake, held the other yourself, and crept out to where he clung, frightened and helpless in the water, to the edge of the broken ice. He said he must surely have let go before you reached him if you had not kept encouraging him: 'Hold on tight, Phil, just a little longer. Don't be afraid—I'm coming now—I will pull you out—there, now I have hold of you—work easy, lad, and we're safe.' The ice broke again, and you went in, too, but you clung to the rope and so saved both. You must show me the river some time, and just where it all happened."

Still the horizon claimed Tom Norton's attention, still he spoke no word; his lips were firmly shut into a thin line, and the fingers which had lightly held the reins over Dobbin's back had tightened.

The sweet voice went on: "You remember, too, one day in school you drew a funny picture of the teacher upon the blackboard. Of course, he was angry, and after the scholars were seated demanded to know who did it. No one answered, but something in papa's face made him ask if he drew it. 'No, sir!' 'Do you know who did?' A reluctant 'Yes, sir. 'Tell me his name!' And when he would not answer the master thundered, as he reached for his ferule, 'Step forward then; he who shields the wrong-doer is guilty also, and shall be punished.' But as papa stepped forth from the front seat where the little ones sat, you sprang up from yours in the back of the room, crying, 'Stop! Don't you lay hands upon my brother. I drew the picture; you can punish me.' The teacher was a man of quick impulses. He dropped the ferule, and after looking from one to the other of you boys said, 'You may both take your seats. I will see you after school.' And when you remained after the rest were gone, he only talked to you gravely, and ended by saying, 'Well, I am going to forgive you, Phil, for your disobedience, and you, Tom, for your mischief. I think you will outgrow that tendency; but I hope you will always be as loyal to each other and as honorable toward all in the more serious things of life as you were this afternoon.'"

The set lines on the old man's face had relaxed and his lips quivered; and if he saw the western horizon it was only through tears, for they rolled fast down his thin, brown cheeks and fell unheeded on his nerveless hands. The girl understood; there were tears in her own eyes, and she laid her soft hand in mute sympathy on the hard, thin fingers of her companion. For some time neither spoke. The man was seeking to regain his self-control and the other seemed occupied with the novel sights and sounds along the way. At last she spoke:

"Are we almost home, Uncle Tom?"

"Yes; you can see the house and barn over the trees around the bend in the road."

"Oh, I am so glad! I have always been so anxious to see it. It seems strange, too; a week ago it appeared as far away as ever, and now I am almost there." She eagerly scanned the rambling, old-fashioned buildings, devoid of paint and gray with the shadow of time. The shutters were closed, save in the rear of the dwelling, and not a shrub or blossom adorned the premises. Altogether the place did look forlorn and neglected, and not in the least interesting to the ordinary observer; but association made it dear to this girl, and she felt a sort of sympathy for it, as though it were a living thing whose life had slowly vanished and left only a shell behind. As its owner had told her, he and the old farm were both nearly worn out.

"Are you disappointed?"

"N—no—" hesitating a little; it looks about as I expected, only papa said the buildings were painted white, and there was a pretty flower-garden in front of the house full of sweet, old-fashioned posies."

"There used to be," admitted Mr. Norton, uneasily; "but the flowers died out from neglect, I suppose, and the paint wore off. As I didn't care for show, and thought the buildings would last as long without paint as I should, I didn't go to the expense of recoating them."

The girl sighed very softly and was silent for a time; then she suddenly smiled and said, "Really, I had almost forgotten it, but I am very hungry."

Mr. Norton looked ruefully at the bag of crackers which grocer Hatch had thoughtfully deposited in the carriage. "I'm afraid there isn't anything but crackers and milk—for supper," he stammered.

"Never mind; that will suit me perfectly—so long as there is a plenty of both," she laughed.

Out on the porch, after the simple meal was ended and Mr. Norton had done the chores about the place, they sat in the gathering twilight and chatted; that is, the girl did the greater part of the talking, while her companion listened—and thought a great deal. She told him how happily she and Aunt Sarah lived and played at keeping house in their three rooms in a city apartment-block, and how hard Aunt Sarah had worked at dressmaking that she might attend school. "But next winter I am going to be a bread-winner, too, and I am so glad. I shall either help Aunt Sarah sew or find a situation where I can earn my living; so you see what a world of good this visit with you in the country will do me. I mean to breathe in all the health I can from this sweet, pure air, and I shall carry the memory of your kindness and of all these beautiful country sights and sounds back to the noisy city with me, and shall enjoy them over and over a hundred times." After a moment she continued, brightly:

"To-day I have been your guest; to-morrow you must let me be your housekeeper. You have no idea what a success I shall be. Aunt Sarah has taught me all sorts of useful things, and I am going to take the very best care of you and the house."

Tom Norton smiled. How could he help it, looking into those laughing eyes?

"I'm almost afraid I have forgotten how to be taken care of," he said.

"Pleasant things are usually easy to recall."

And so they talked on, while the crescent moon hung fair in the sky and the stars kept their nightly vigil, till at length the girl said, "I wish you would bid me good-night as papa used to. He always kissed my forehead when he said 'Good-night, Alice.' Aunt Sarah does the same; will you?"

For answer he leaned over, awkwardly enough, and touched her white brow with his lips.

"Good-night, Uncle Tom."

"Good-night, Alice." He had not once spoken her name before, having purposely avoided doing so, and the word cost him an effort; but alone he repeated it over and over to himself as though, having once breathed it, he loved to speak it and hear it again. "Her name is Alice, like her mother's; and she looks just as her mother did twenty years ago."

Then he entered the house, and going straight to his sleeping-room, opened a large, old-fashioned desk. He drew forth a tiny key from its hiding-place in one of the pigeonholes, and after a moment's hesitation unlocked a small drawer that had been closed for years. With trembling hand he took therefrom two pictures, and in truth the features of the woman's portrait were very like those of the light-hearted girl who had just left him. Long and earnestly he gazed, as though he could never be satisfied, and memory was busy calling up from the past scenes and incidents which now seemed almost to have belonged to another life. There was a tiny curling lock of chestnut hair, that he wound about his fingers, and a few letters, which he touched reverently. At last he took up the other picture. "Phil!" broke from his lips. "What a handsome lad he was! So brave, and yet so gentle! No wonder she loved him best." He sighed heavily and passed his hand across his brow. "And since then I have shut myself away from the world, even like these poor creatures, feeling that my story had been told and life must henceforward be barren and desolate."

He looked back over the long years and recalled his solitary existence, whose sole interest had been the accumulation of property. He knew men had avoided him on account of his forbidding coldness and taciturnity, and had termed him exact even to meanness in business dealings; some were blunt and inconsiderate enough to call him "miser." All this he knew, but his heart seemed to grow more indifferent toward his fellow-men, harder and colder as time went on, until it seemed frozen within him—dead, he sometimes felt—and he had long ago decided that the only satisfaction in life lay in the gaining of money. But the coming into his darkness of this bright, happy, young creature, who loved him and trusted him whether he would or no; who shed the warmth and sunshine of her presence all about him, till its glow reached his very heart and stirred into being within him emotions he had long thought crushed out of existence; who, with gentle but persistent hand had thrown open the long-closed portals of his youth and called up old memories of those whom he had truly loved and who had loved him—this innocent, artless girl in a few hours had somehow managed to shake to their foundations the edifice, false though it was, on the substantial truth of which he had fashioned his existence. And he wondered if, after all, he had been mistaken and she, scarce a woman yet, had gained a philosophy of peaceful, gladsome living which he had failed to discover.

Long he sat there, his head bowed on his hand, pondering the question, but found no practical solution which would apply to his situation. "For," thought he, "I am an old man—too old to change my opinions or manner of living; in fact, I can hardly remember when I did not feel old. Besides, the past cannot be recalled."

With a sigh he returned the pictures to their hiding-place, but nevertheless sought his couch with a sense of satisfaction which he had not experienced for years, and which he could not understand.

Next morning when Mr. Norton came to the farm-house for breakfast, having arisen early and performed his accustomed tasks, he saw standing in the door what seemed to him a vision of loveliness—Alice arrayed in a pretty bright blue print gown, her rosy face dimpling into a smile of welcome at his approach.

"Good-morning, Uncle Tom. I was up almost as early as you were, and I have been busy, I assure you. I looked about the place a bit, got acquainted with some of your neighbors, and have got a delicious breakfast all ready for you. Just see! Don't you believe I am a fairy, and have only to wave my wand and call, 'Omelet, corn-muffins, strawberries and cream,' to see them appear?"

"Well, I confess I don't see how else you could have produced such things in this house," he admitted, with a puzzled but appreciative look at the breakfast-table.

"And are not those wild roses lovely in that dear old-fashioned blue bowl? Neither the beautiful nor the substantial are lacking at our board this morning."

So she chattered merrily on, while her uncle did full justice to the meal. When it was nearly finished, he said. "I am quite ready to admit your success as a cook. I haven't eaten such an omelet and muffins since mother used to make them for me; and now that you have had the satisfaction of mystifying me, tell me, if you please, where you found the materials; certainly not in my pantry, for I know my cupboard was bare."

"Well, I did find the meal for the muffins in your pantry, but you must thank your delightful and generous neighbors for the eggs and berries."

"Neighbors? I didn't know I had any of the kind you describe," in a tone of surprise, a flush of red showing through the brown of his cheek.

"Why, yes; the Hamiltons. I found them so pleasant and friendly. You see, when I

walked over near the wall which divides your land from theirs to get these roses, and found Mrs. Hamilton and two of her children near by planting some flower-seeds, it was only natural to smile and say, 'Good-morning;' for I felt so happy and it was such a good morning that I wanted to speak of it to some one. And she is so very sociable and motherly that our acqnaintance progressed famously—across the wall. I told her I was your niece, come to make you a visit; that I was going to be your housekeeper and take excellent care of you; that you were such a kind, good-hearted man it seemed a pity for you to live alone, and I was going to brighten everything up for you while I remained. She seemed interested, and told me something about herself, and asked me to be neighborly; and then one of her boys came running up with a lot of eggs he had found, and she just insisted that I should take half of them, because she knew you did not keep hens. In a few minutes another son, a young man, came out there with a big basket of strawberries he had picked, and those kind people would give me a lot for breakfast; and they say I am quite welcome to get as many from their vines as I care to pick, as they cannot use them all. I am so fond of them. I was only too happy to accept their kind invitation.

"And then just see these flower-seeds—nasturtiums and morning-glories—which Mrs. Hamilton gave me. I am going to plant the 'glories' so they will climb up over the porch, and the nasturtiums around that big elm-tree, if you are willing. We shall soon have them growing and blossoming finely, and they are so pretty."

"Oh, plant them, by all means."

"And, Uncle Tom, if you will buy just a few things at the store when you drive down this morning, I will agree to get a very nice dinner for you, which will, of course, include some fresh vegetables from your garden."

"Very well; I will call around for your list before I go."

Mr. Norton returned to his work in the barn; but, truth to tell, instead of going about his tasks as usual he sat down upon the wheelbarrow and relapsed into a brown study. He frankly admitted to himself that his niece was a puzzle to him; thus far she had been a constant source of surprise. She seemed to have a faculty for calling out the very best that was within every one, without the slightest effort or design, and she seemed just bubbling over with happiness, which she communicated to all with whom she came in contact. She had made friends at once with his neighbors, the Hamiltons, between whom decided antagonism. He remembered now that the original cause of the trouble had been of a trifling nature, but little by little the breach had widened until there seemed no hope of a reconciliation. True, at one time Mr. Hamilton had made some overtures toward peace, but they were promptly declined and had never been repeated; the two neighbors having as little association as though living in different states. Yet this morning he had heartily enjoyed a delicious breakfast furnished almost wholly by the generosity of these same disagreeable neighbors. How was it he had never discovered their attractive qualities? Just then there floated out to him from the open kitchen window a sweet young voice singing:

"All up and down the whole creation, sadly I roam,
Still longing for the old plantation, and for the old folks at home.
All the world is sad and dreary, everywhere I roam;
Oh, darkies, how my heart grows weary,
Far from the old folks at home."

Were there tears in Tom Norton's eyes as he listened? Well, perhaps so, for he drew his hand across them several times. But when, after a few moments, he arose and went about his work, the questions which had perplexed him were evidently still unanswered; for there was a pathetically unsatisfied expression on his face, as he shook his head, and murmured slowly, "I—don't know."

Little by little Alice opened the long-unused rooms in the old farm-house, cleaning them thoroughly and letting in the sweet summer breeze and the bright, purifying sunlight. Under her gentle dominion the quaint, stiff, old-fashioned furniture seemed to unbend and assume a more comfortable and homelike appearance; and there was always sure to be flowers around the rooms—careless bunches of wild blossoms, and bouquets of rollicking nasturtiums.

Little by little, under the same gracious influence, Tom Norton's nature expanded, and his heart, long closed to the sweetness and beauty of life, opened its doors and admitted the warmth and wholesome sunshine which radiated from a brighter and more loving spirit. And he grew to look forward with pleasure to the quiet evenings at home, and to watch, on his return from town, for Alice's sweet face at the door, framed in by the delicate morning-glory vines and blossoms; so that when he missed seeing her he somehow felt disappointed.

The summer days flew swiftly by. June had passed through flower-strewn paths into sultry July; and one day, in the latter part of that month, when at noon Mr. Norton approached the farm-house from the field for the midday meal, Alice ran out to meet him. He smiled at her flushed, eager face, and asked as she came near, "Well, what has happened?"

"Oh, Uncle Tom! There is a poor woman in the house who has walked from the town to bring you some money for rent—only five dollars, though she says she owes more. Her name is Jameson."

Mr. Norton's face clouded. "Yes, they owe for two months' house-rent—sixteen dollars; the last time I called for the money she told me she would bring or send it as soon as she could get it."

"Her husband has been ill for a long time with a fever, so they have had no income."

"People should have something laid by for just such emergencies, and not expect others to support them when a rainy day comes."

"She says he only earns a dollar and a quarter a day in the factory, when he is at work, and they have three children to care for." Alice cast a pleading glance up into her uncle's face, but there was no response. "And since he has been improving a little, so she could leave him alone part of the time, she has been doing washing for people to earn what she could; and she does look so tired and careworn, you will surely pity her when you see her. She seemed greatly distressed because she could not pay you more, and fearful that you would insist on their moving out of the house at once. I comforted her as best I could; assured her you would not think of requiring them to move under such circumstances; that you were one of the kindest of men and would do just what was right. I told her she must take dinner with us, and in the meantime made her lie down on the lounge in the sitting-room, where she fell asleep at once, seeming quite exhausted."

They had reached the house by this time, and entering, Alice softly pushed open the door into the sitting-room and motioned her uncle to come where he could see the sleeping woman. The position of her body expressed utter weariness—one arm hanging inert over the side of the lounge, the thin fingers relaxed during this brief respite from the toil which had so hardened them. Her pale, emaciated face had want and care written in unmistakable characters upon its features; the sunken cheeks and temples, the dark-circled eyes, the lines across the forehead, the pitiful droop at the corners of her mouth, told their story all too well. One might have thought her past all earthly suffering, save that a trembling, broken sigh parted the drawn lips; and Tom Norton turned away with an involuntary answering sigh, saying, "It would probably be better for her if she were really dead, as she looks."

"What would become of her family who need her so much?" queried Alice, softly closing the door, lest the sleeper should be disturbed by the preparations for their meal. "The money she brought is on your desk; she asked that you would give her a receipt for it."

After the table was spread, Alice stepped to the door of her uncle's room to call him.

"Come in a moment, please." Wondering, she entered. "If Mrs. Jameson were your tenant instead of mine, what would you do under the circumstances?" asked Mr. Norton.

"Do you really want me to tell you?" she questioned, looking straight into his eyes, with one of her brightest smiles.

"Certainly."

"Well, then, I will show you. If I were able, I would write a receipt like this and give it to her along with the five-dollar bill she brought."

Mr. Norton took the receipt his niece had written. "'Received payment in full to October 1st.' Do you realize that means four months' rent—thirty-two dollars?" he demanded.

"Yes, I realize that it would mean only thirty-two dollars to me, while it would mean comparative comfort and release from care—perhaps even life itself—to these unfortunate people."

Alice's voice was soft, but intensely earnest, and her eyes were eloquent; Tom Norton, looking into their clear depths, experienced a sensation of shame which sent a crimson flush to his forehead. A moment he hesitated; then taking up a pen he signed his name to the receipt, laid the five-dollar bill upon it, and handing them to his niece, said, "Very well, you may give them to Mrs. Jameson."

Alice's face fairly shone with delight; she threw her arms around her uncle's neck, in her impulsive fashion, exclaiming, "I thank you a thousand times! You are—the best—Uncle Tom—in the whole world!" punctuating her speech with kisses.

"I wish I thought so, too," he said, and somehow his face seemed to have caught a reflected glow from Alice's joyous countenance. Just then they heard Mrs. Jameson come out of the sitting-room, and going at once to her Alice said, "We were just ready for you. I hope you feel rested and refreshed after your sleep?"

Their repast was simple, but wholesome and temptingly arranged. It seemed a feast to the guest, who, however, was filled with anxiety for her husband, and was shy and constrained before Mr. Norton; he, as usual being rather grave and given to silence. But Alice was equal to the occasion; she was so animated with excess of happiness, and so interested in Mrs. Jameson's family and their situation; so sympathetic and at the same time so encouraging, that the poor woman at last forgot her awkwardness and echoed Alice's confidently expressed hope that everything would soon be brighter, though, it must be confessed, with considerable less assurance.

At length the meal was finished, and the young hostess had had the satisfaction of seeing for a moment a faint smile lighten the wan face opposite, even as sometimes a pale gleam of sunshine struggles through the clouds and quickly fades from sight. The big, old-fashioned clock in the corner solemnly struck one. Mrs. Jameson started at the sound.

"Is it really one o'clock? Then I must be going home; Joe and the children will need me. I thank you for your kindness; this is the first real rest I have had for weeks."

"Then you will want your rent receipt," smiled Alice; "I have it here, all ready; Uncle Tom asked me to give it to you."

"I am sorry I was obliged to bring so little of what we owe. I will let you have more just as soon as I possibly can," said Mrs. Jamesou, timidly, and with an appealing glance at Mr. Norton.

Just then the bill fell out of the receipt which she held; she picked it up in surprise, while a faint color stole into her cheeks. "This is yours," she said, handing it to her landlord. He only shook his head, but Alice said, "No, it is yours; read your receipt—that will explain everything."

With trembling fingers the woman unfolded the bit of paper and read; then she re-read, this time aloud: "In full to—October 1st." Still surprised and half bewildered she looked from one to the other of her companions. "What does it mean?" she asked.

"It means," said Alice, gently, "that your rent is canceled up to October 1st, and that the money you brought to-day is yours to use for whatever you may need. You know I told you Uncle Tom was very kind and would do just right."

The poor creature, overcome by this unexpected good fortune, was alternately sobbing and laughing. At length she grew sufficiently calm to say, brokenly, "I can't thank you enough, Mr. Norton; I can't make you understand what a load this lifts from me. I felt completely discouraged this morning; it seemed as though there never would be any more rest or any more brightness in the world for me. Joe mends so slowly, partly because he worries about running in debt; and work as hard as I could, and living ever so poorly, I could not manage to pay our expenses. And I'm ashamed to tell you I don't deserve your generosity, for I had been told you were hard and grasping and I believed it was so; while instead you have been more kind to me than any one else in the world. I shall tell them all now how good you are."

"You can thank Alice here, not me, Mrs. Jameson; it was all her plan," said Mr. Norton, speaking rather huskily, owing to a queer lump in his throat.

"Well, I thank you both from the bottom of my heart; and if gratitude could pay you you should have full measure for every dollar."

"We are just as joyful over it as you are; are we not, Uncle Tom?" with smiling lips, and eyes shining through happy tears.

Mr. Norton only nodded and smiled in reply, perhaps unwilling to trust his voice in speech again; for he took occasion, when he thought no one would notice, to furtively wipe his eyes. And that night when he fed Dobbin with an unusually liberal allowance of grain he remarked aloud, musing on the event of the day, "It does beat all what a feeling of satisfaction it gives a man to lend a helping hand to some one who needs just that lift; it may cost money, but I guess it pays, though I have never before believed in anything but hard cash as a return for my investments."

About a month later the Nortons—uncle and niece—were sitting out on the porch in the twilight, as was their custom. "How much shorter the days are growing; and the crickets are chirping a prophecy of fall," quoth Alice, half pensively; then added, irrelevantly, "Have you noticed how fine the Hamilton's house and barn are looking, with their fresh coat of paint?"

"Oh, yes; of course, it is a great improvement."

"Well, Uncle Tom, I have a little plan in mind, which I hope you will help me to carry out. I was telling Mrs. Hamilton to-day how much I wished these buildings could be painted again just as they used to be when papa lived here, and as I had always thought of them; and I said if I were a young man I would paint them myself—you know Arthur and Frank Hamilton did all the painting over there. Then Mrs. Hamilton—she is such a kind woman—said if you would provide the paint, her boys, as she calls them, would put it on, working half of each day, as they did at home. You see, I have helped her some in sewing, and she has a good deal more to be done before the cold weather, and I could accomplish considerable during the remainder of my stay with you. Aunt Sarah has taught me to cut and fit dresses, as well as to make them, and—"

"And you want to do dressmaking to pay for having this house painted? I shall not listen to such a proposal!" interrupted Tom Norton, with much decision.

"But, Uncle Tom, you know you said it would cost too much money, and you were quite satisfied with the place as it is; so it would only be done to gratify my whim, and you would be generous to pay for the paint."

"I remember I said something of the kind," speaking rather slowly, "but I have changed my mind; and you may tell Mrs. Hamilton I will buy the materials to-morrow and will pay the boys to paint the buildings."

"White—and the blinds on the house green—just as they used to be?" queried Alice, eagerly.

"Just as they used to be," he said, with a half sigh; then, "but your sewing is not to enter into the bargain in any way. You find all the work you ought to do here. Besides I like, when I am away, to think of you as being around the place, and to find you here when I return." He spoke hesitatingly and awkwardly enough, but then thoughtfulness for others and the making of pretty speeches had always been quite out of his line of effort.

Alice understood and thoroughly appreciated the compliment. "What a dear old Uncle Tom you are!" then laughing softly, "but it is really rather unfair to place me at such a disadvantage; of course, I cannot urge my proposition when you disarm me with such a graceful argument."

And so it came about that the old place was rejuvenated and appeared once more in its one-time garb of spotless white. The operation of transforming it was rather a long one, but was enjoyable to all concerned. The young painters found the change of occupation from their accustomed labor altogether pleasant, and in the opportunities for renewed acquaintance between the two houses which resulted both the Hamiltons and Mr. Norton were surprised to find agreeable neighbors instead of enemies, and good-will took the place of former hostility. It must be admitted the situation was somewhat strained at first, but Alice's tact and all-pervading cheerfulness soon put every one at ease; and when the task was completed all were ready to echo her enthusiastic opinion that it was a great success.

"I shall love to think of it, after I go home, as it looks now, in its fresh dress of white and green, nestled here among these beautiful old elm-trees—just as papa described it. I think no other place will ever seem quite so restful and homelike to me."

"Why don't you stay here then? Why do you speak of going away?" asked Mr. Norton, uneasily.

"Because I have already made you a long visit; though it has been so pleasant and seemed so short. Besides, the letter which you brought me from the office to-day was from Aunt Sarah, and tells me she has returned home and thinks I had better come back to her within a week or two—you know it is almost October. I know she misses me and really needs me."

"But I, too, need you, Alice. I can't let you go," said Tom Norton, in a strange, suppressed voice. Then all at once the barriers of his reserve seemed to give way before the force of the intense feeling pent up within him, and for the first time in years, perhaps in his existence, he expressed freely the emotions of his heart:

"You cannot understand, Alice, what a change you have wrought in me; you cannot know, as I do, what a hard, selfish, unloving man I was before you came to me! I had long felt—since a great sorrow darkened my youth—that I, of all the world, walked alone, without friends or kindred; that my heart was dead within me, so lacking was it in human sympathy. But when you kissed me at our first meeting a breath of new life seemed to thrill my whole being; and your persistent, affectionate good-will toward me, and all mankind as well, has been like sunshine after darkness. I have seen the world through your eyes, and found it very different from the world which I had heretofore made for myself; but I know the change is in me. What you have done for the old farm-house here—renovating, purifying and brightening within and without—you have also done for me; I can't let you go away, lest we both fall back into that dreary existence which we so long endured. I feel as though I had been transformed, and I find the new life so beautiful that I dread any possibility of a return to old conditions."

Tom Norton's voice was low, yet very earnest, and he was surprised at his own eloquence. But the thought of losing the sweet companionship which had grown so dear, so necessary to his happiness, had overcome his usual restraint, and out of a full heart had his lips spoken.

Alice's hand slipped into his, as she said, softly, "Dear Uncle Tom! I am so glad to have brought you a glimpse of sunshine, and I wish I could remain with you. But what would become of Aunt Sarah? She needs me, too."

"Then she must come here and live with us!" exclaimed Mr. Norton, with determination.

"That would be delightful if it could be arranged. And how good of you to propose it!" exclaimed Alice, enthusiastically.

"Good? No; only selfish, I am afraid. But certainly you can persuade her to come to us. You seem to have a faculty for making people do whatever you desire, even the most hardened and unpromising ones—like me, for instance."

"Nonsense!" laughed Alice; "you are giving me a good deal of praise which I don't deserve. I just love you, that is all; that is the only secret. People can almost always be loved into doing what is best and right."

"I believe that is so; but I lived almost a lifetime without discovering the truth, and in the same darkness should doubtless have written 'finis' at the end of my life's story had it not been for you."

Alice succeeded in inducing her aunt to make her home in the Norton household, and the three dwelt very happily together in the old farm-house. After a time another member was added, in the person of Arthur Hamilton, who had from the first given his love to sweet Alice, and who was "the happiest fellow in the world"—so he declared—when he won her promise to become his wife.

Tom Norton lived long thereafter, at peace with himself and with all mankind; and many who knew him marveled at the great change which gradually altered him from a cold, selfish, grasping man—unloving and unloved—into a gentle, kindly soul, expressing in word and deed good-will toward all; but he alone knew its full extent and significance, and the beauty of the new life into which he had entered, through what he always mentally termed his "transformation."

A WOMAN'S LOVE

A sentinel angel sitting high in glory
Heard this shrill wail ring out from purgatory:
"Have mercy, mighty angel, hear my story!

"I loved—and blind with passionate love, I fell.
Love brought me down to death, and death to hell;
For God is just, and death for sin is well.

"I do not rage against this high decree,
Nor for myself do ask that grace shall he;
But for my love on earth who mourns for me.

"Great spirit! Let me see my love again,
And comfort him one hour, and I were fain
To pay a thousand years of fire and pain."

Then said the pitying angel, "Nay, repent
That wild vow! Look, the dial finger's bent
Down to the last hour of thy punishment!"

But still she wailed. "I pray thee, let me go!
I cannot rise in peace and love him so;
Oh, let me soothe him in his bitter woe!"

The brazen gates ground sullen ajar,
And upward, joyous, like a rising star,
She rose and vanished in the ether far.

But soon adown the dying sunset sailing,
And like a wounded bird her pinions trailing,
She fluttered back, in broken-hearted wailing.

She sobbed, "I found him by the summer sea
Reclined—his head upon a maiden's knee—
She curled his hair and kissed him. Woe is me!"

She wept. "Now let my punishment begin!
I have been fond and foolish. Let me in
To expatiate my sorrow and my sin."

The angel answered, "Nay, sad soul, go hither!
To be deceived in your true heart's desire
Was bitterer than a thousand years of fire!"

—John Hay.

ANY LETTERS FOR ME?

You asked this question at the little wicket surrounded by glass boxes of a clerk whose head was just visible inside; or if you live in a city or large town, you put the question to the man in gray passing by. Who is the "man in gray?" You call him the postman. He has a bag, hung by a strap from his shoulder, and carries off that letter of yours with a red stamp on it without even asking you what he is to do with it or why you have given it to him.

Did you ever reflect upon the establishment behind the man in gray, one of the largest, most complete and most marvelous establishments ever created by human ingenuity? It is called the postal system. Years ago, when letters were carried by postmen on horseback from city to city and from farm to farm, in the days when Warren was fighting the British and dying for his country at Bunker Hill, this great American-machine-for-disseminating-intelligence was established. The Continental Congress took charge of the postal service July 26, 1775. One of the wisest men who then lived—one of the wisest of all Americans—was the first postmaster-general, Benjamin Franklin.

If you sent a letter in those days, or any time before the year 1863, you had to pay for distance. It cost twenty-five cents, and then later ten cents to send a letter to San Francisco. In 1863 the rate was fixed at three cents for any distance whatever. In 1883 the postage was reduced to two cents. Now you can send by mail a pound of candy or a jack-in-the-box, but before 1860 you could only send something either written or printed. No, the postman will not take gunpowder or matches of you to mail, especially if they are all in one bundle; but anything not dangerous and not too heavy is mailable.

In a little over a hundred years the early system of coaches and horseback postmen has become an enormous establishment. There are about 70,000 post-offices in the United States. It costs so many millions to run these that you wouldn't realize what the figures mean if I gave them. Did you ever hear of the "star routes?" These are the long stage-lines conveying the mails to towns, mostly in the far West, away from the railroads and distant from traveled lines.

But what is behind the "man in gray?" First, a great department of the United States government. Hon. Charles Emory Smith is now the chief of this department and a member of the president's cabinet. The post-offices are in four grades or classes. The first or highest grade comprises the post-offices mostly in the large cities. The postmasters of these offices receive a salary fixed by law. The largest post-office is that in New York city. In the other three grades the salary bears some proportion to the amount of business done. Postmasters of the three highest grades are appointed by the president and confirmed by the senate. Those of the fourth grade are appointed by the postmaster-general. The postmasters are feed-table and driving-wheel of the machine-for-disseminating-intelligence. They take the mail into the machine and start it going. Then comes the rapid rotators, constituting another branch of the service. These are the railway mail-clerks, who are pieced out, as it were, by the stages and riders. These clerks ride on a thousand thundering trains, and take in and put off the mail-sacks. Inside the cars are conveniences for emptying the sacks and assorting the mail. If they put your letter to John Smith, of New Haven, into the Omaha sack, John doesn't get it so soon, so they have to be careful, expert and rapid. All mail must travel in a government sack, sealed before starting by the postmaster, with the date and hour of starting on the label in the patent lock. Then the mail-clerks pass it from conveyance to conveyance until it reaches its destination. But the rapid rotators, whom you never see now at the end of the long journey, give place to the busy ambulators. These are the men in gray, and we call them postmen.

This branch of the postal service is called the carrier service. All cities of 10,000 inhabitants may have postmen. They must wear a gray uniform and a government badge. They collect the mail from street-boxes and deliver it at dwellings and stores. They get a salary of about $800 a year for their service, and work eight hours a day. And this great army of workers constitutes the great machine. This machine is oiled and regulated at the national capital by a smaller army of clerks and inspectors, who keep the accounts and preserve the clock-work balance.

One of the great auxiliary functions of the postal service is the provision for being a convenient banker. This is called the money-order branch. It will take two dollars, or fifty dollars, or one hunderd dollars for you, and carry it to any other money-order office in the country. The queer part of the matter is that although you put your money in at your office, and your friend to whom you send it draws out the same amount at his post-office, the money is not usually sent at all. Somebody else is sure to be sending back money from his post-office to yours, and this interchange goes on for a month or three months, and then these two offices have a balance struck. The one that is in debt pays up to the government, and the one that has a credit receives it back. This money-order business is thus a great national accommodation bank system for popular use. You buy a money-order at one office and cash it at another.

All the people who do this work must be polite, well-behaved and honest; must answer all proper inquiries, and treat the public with respect. I feel like removing my hat when I walk up to this stupendous machine-for-disseminating-intelligence, and ask, "Are there any letters for me?"—W. C. Stiles, in the Journal of Education.

PORTO RICAN MUSIC

Like all other Spanish-speaking peoples, the Porto Ricans are fond of music. Every cafe has its orchestra, for a cafe could hardly do business without one. Every main street during the latter part of the day has its little itinerant band of guitar and violin players, and the warm nights are made pleasant to the strollers along the streets by the sound of stringed instruments which floats from behind the latticed, vine-clad screen of private residences.

Nearly all the airs are pitched in a minor key, which, even when intended to be joyous, contains a plaint to the Anglo-Saxon fond of Sousa's robust music. To one who has traveled in Spanish lands the music of Porto Rico at first seems very familiar, but the ear is not long in discovering something novel in the accompaniment of the melody.

It sounds at first like the rhythmical shuffle of feet upon sanded floor, and one might suppose some expert clog-dancer was nimbly stepping to the music made by the violins and guitars. The motion is almost too quick, too complicated, for this, however, and it is the deftness of fingers, and not feet, which produces it.

It comes from the only musical instrument native to the West Indies, the "guira," which word is pronounced "huir-r-a," with a soft roll and twist to the tongue only possible to the native. The "guira" is a gourd varying in size in different instruments. On the inverse curve of the gourd are cut slits like those in the top of a violin. On the other side of the gourd opposite the holes is a series of deep scratches. The player balances the gourd in his left hand, holding it tightly that none of the resonance may be lost.

With the right hand he rapidly rubs this roughened side of the gourd with a two-tined steel fork. In the hands of a novice this produces nothing but a harsh, disagreeable noise. In the hands of a native "guira" player a wonderful rhythmic sound comes from this dried vegetable shell—a sound which, in its place in the orchestra, becomes music, and most certainly gives splendid time and considerable volume to the performance.

The player's hand moves with lightning rapidity. The steel fork at times makes long sweeps the whole length of the gourd, and then again vibrates with incredible swiftness over but an inch or two of its surface. There seems to be a perfect method in its playing, though no musical record is before the player, and it seems to be a matter purely of his fancy and his ear as to how his part shall harmonize with the melody of the stringed instruments.

The "guira" is found in all the West Indies, but seems especially popular in Porto Rico. The players generally make their own instruments and apparently become attached to them, for as poor as these strolling players are, they will hardly part with their "guiras," even when offered ten times their real value. They are distinctly a Porto Rican curie, and strange as it may seem, Porto Rico is probably more destitute of tourists' "loot" than any other foreign country known to the travelling American. The tourist who can secure a "guira" may congratulate himself, for it will be hard to get, and is the very thing which can be carried away from the island as a souvenir which is distinctly native and peculiar.—Kansas City Star.

THE BEST PINEAPPLES IN CUBA

Nowhere on the globe do pineapples thrive as in eastern Cuba, where the conditions of soil and climate bring the "golden apples of Hesperides" to absolute perfection; yet the pineapple industry has never had much attention in this section. Here is another chance for the enterprising Yankee. A tract of unoccupied land, extending far as one can see, may be bought for a few dollars and turned into a fruit-farm, the virgin soil of unparalleled richness being capable of producing every tropical growth. Shipping facilities are already established at Baracoa and several small ports, and if the land touches the Yumuri or some other river, so much the better for its owner. Until one has seen the golden glory of the pineapple-plantation he can think of no more attractive sight than a sugar-cane field, glistening pale yellow under the torrid sun and billowing in the gentle breeze like a wind-swept sea. But even more fascinating is a field of pines, each great "apple" guarded by a circle of glittering, sharp-edged bayonets. In Florida the pine-apple-leaf is so sharply serrated that the thought of getting around among them suggests a field of torture. Evolution seems to have progressed further in Cuba, for in the older and more carefully cultivated plantations the saw-teeth that edge the long, pointed leaves have mainly disappeared.

Before the war it was the sight of a lifetime to go out to Marianao, a suburb of Havana, and there drive through an estate which had eighty thousand pinapple-plants in full bearing. Over in Nassau they call the pine-plantations "groves" and "orchards" as if they were trees. Whether groves or fields, the plant is about the same, producing one of the most luscious and popular fruits known to man, for which there is constant and ample demand. Like most things worth having in this troubled life, the golden "pines" are not easy to get at. A very short stroll among the stinging leaves will lead you to sympathize with the New-Yorker, who, after a visit to Marianao, said: "You do not mind the first two or three hundred sticks and prods from the needle-points of the bayonet leaves as you cross a field, but after awhile your tortured cutis can endure no more, and your remarks about the pineapple crop are likely to be prejudiced by present soreness. How much nicer it would be if the 'apples' really did grow in orchards and you could send a colored boy up the trees to shake down a few and then could sit down in the shade and eat them."

A plant produces only one pine at a time. The fruit thrusts itself upward in the middle of a mass of long, narrow and sharp-arched leaves spreading forth from a central stalk, precisely like those of the Agave Americana, or "century-plant," with which everybody is familiar. The stem is perhaps eighteen inches to two feet in height.

The same plant produces a second apple, and a third, and so on through several bearings; after which a new plant must be started from the "slip." Nothing is easier of cultivation or requires less capital and previous experience, and few crops bring in greater or more certain returns.—Providence Journal.

HOME-MAKER—PATIENT MOTHER

I BELIEVE that the most perfect synonym for the word home-maker is a loving, patient mother. We hear and read so much on the subject of "The Ideal Woman," "The Perfect Home-maker," "The Systematic Housekeeper," "The Model Mother," and kindred subjects, that we are overwhelmed with the multitude of these articles, and are in danger of being engulfed by the advice, theoretical and practical, which they contain.

The more I think of it, the more I am inclined to the opinion that the patient mother is the ideal woman, the perfect home-maker, the systematic housekeeper and the model parent, all in one. We are all familiar with the words, "And now abideth faith, hope, charity, these three; but the greatest of these is charity." We know that it is this love—blessed love—which is the corner-stone of the home; but is not this God-given patience the cap-sheaf of the whole?

Patience is not lack of spirit and energy; far from it. It is the culmination of these qualities under consummate control. I do not believe there are very many people who possess this virtue naturally, in any marked degree; yet it can be cultivated. We often wish that we had as much patience as Mrs. Blank, not stopping to think that we might possess an equal amount if we would put forth the same effort to obtain it. We see only the finished work, not what it has cost to produce it.

"But how can I keep patient?" says the systematic and extremely neat housekeeper. "Just when I have my plans all laid, or when I am in the midst of some very important work that will suffer if left even for a few minutes, the baby cries, or one of the older children cuts a finger or breaks a leg, or perchance unexpected guests arrive to spend the day. Again, when I have slaved myself almost to death, and have everything finally in order, the children come in and get everything topsy-turvy in less than no time. I tell you I just cannot retain my patience under such provocations. Housekeeping is such slavish work," she adds, with a sigh, "and children are so trying."

Yes, children are trying; yet what would our homes be without these same dear, delightful, trying children? And housekeeping is not easy work. But should we be slaves to it? If we work so hard day after day that our bodies are exhausted and our nerves worn out, we cannot easily be patient, and we are wont to excuse our irritability on the grounds that we are too tired to be pleasant.

It may be—may be, I say—that we will not be held accountable for becoming impatient when our nerves are all unstrung; but are we always excusable for allowing ourselves to become so weary? Are there not some things that could be left undone or done in a more simple manner? If they must be done, is it not often economy to hire some one to do it? Nothing can fully restore a broken-down body or bring back lost health. Surely nothing should be called extravagant which is necessary to preserve health. It is not right for us to use up physical strength and nerve-force as so many of us American women are doing. And after all, it is not so much the work as the fretting and worrying that accompany it that are doing the harm. It is not the revolution, but the friction, that wears out the machinery. Worry is rust upon the wheels, retarding the revolutions and diminishing their power.

Helen Watterson Moody, in the April number of "The Ladies' Home Journal," says, "Good housekeeping is easy housekeeping, and if a woman wear herself into shreds and tatters keeping house, the case is proven against her." I am inclined to believe that there is much truth in her statement. If we cannot rest from our work we must learn to rest in our work, or it will be impossible for us to become the patient mother we should be.

It is, I suppose, praiseworthy to aspire to be called an immaculate housekeeper, but this should not be the highest aim in life. A housekeeper should also be a home-maker. In order to do this she must sometimes step aside from the routine of daily toil, and rest. Churning brings the butter, but resting brings the cream. The calm, quiet waiting, that the cream may rise, is as essential to the butter as the energy put forth in the churning. The richer part of our natures has no chance to come to the surface if we never stop to think or rest or pray.

As housewives we often possess all the virtues but the passive ones. We are neat and painstaking, good cooks, economical: we are also loving and kind if everything goes along smoothly. But let something go amiss, and we are impatient at once. And oh, the pity of it! We vent our ill feelings on those we love more than life. We would not disclose our anger to outsiders, nor our unhappiness to strangers, neither would we tell all of our disappointments to our friends; yet we too often think we have a perfect right to show these feelings to those of our own household. We are not excusable because naturally sensitive, nervous or impatient, nor exonerated when we say, "I do the best I can." There is much difference between our natural best and that when wrought with the aid of the Heavenly Father. Our best is not our best without his help.

To care for and to train our children to lives of usefulness is pre-eminently our work as mothers, and should be given our best thought and supreme effort. Our duty is not fulfilled when we have given our darlings enough to eat, or have provided clothing for them to wear. Our training should not end with the doctrine that they must obey; there is a soul-training that should not be denied them. The moral nature must be developed. The minds and hands of our children must be employed with pleasant, elevating occupations. The law of substitution works admirably in childhood, supplementing the good for the bad, the ennobling for the destroying. [illegible] must be kept busy, and we must see to it that their energies are directed into the right channels. By doing this we not only aid in the proper development, but are avoiding improper activities in undesirable channels.

It takes time and some patience for a mother to now and then look after the lessons of her children and see how they are getting along at school; but it is a wonderful encouragement to these boys and girls to know that mama takes an interest in their progress, and will assist them in their studies when such help is necessary. Not many of us can leave fortunes to our children, but it is our duty to see to it that they have the best education that it is in our power to give them.

Let the little ones, whether boys or girls, assist in the simple duties that pertain to the housework. "Oh," says one, "it is much easier to do the work myself than to have the children bothering around." Yes, perhaps easier for you, but not so good for them; and while they are helping they are at least kept out of mischief. But this is not all; they are learning many things that will be of use in after life.

It is pitiably sad, however, to allow these little ones to do the work in a careless, slovenly manner because we are too—lazy, I was going to say—careless will sound less harsh—to teach them to do it correctly. It is not difficult to teach them to be systematic if we begin aright. There is a right way to wash dishes, sweep floors, make beds, wash, iron and sew. It is our privilege as home-makers to teach them to do these things in the best possible manner. We will save time by taking time for the necessary instruction.

A girl's knowledge of sewing and housework never comes amiss. Even if she does not have to do her own work—although the chances are that she will—she needs to know how it is done. The more thoroughly she understands the work, and the more thoroughly she has mastered the art, the less like drudgery will it be, and the more perfect home-maker can she become. I wonder if all of us might have the words truthfully inscribed on our tombstones that a dear old lady had on hers, "She was always pleasant in the home."

ELLA BARTLETT SIMMONS.

CHIP-CARVING

Several readers of the FARM AND FIRESIDE have sent questions concerning this branch of carving, which show that sufficient interest is felt to warrant another article on the subject.

Chip-carving in its origin and most general exercise belongs to Norway and Sweden. There the peasants make it their pastime, a pleasant and profitable way to spend their long northern evenings. As they do the work they use but one tool, a hook-bladed knife, which they manage with one hand and hold the wood in the other. In writing about chip-carving in former articles I have said that it could be done with a chisel, because I have used that tool. As I first learned wood-carving with chisels and gouges I simply "picked up" chip-carving, which is so much easier than relief-carving, which requires several distinct processes. A picture of anything is worth half a column of description, therefore you will be pleased to see an illustration of the short, curved knife proper for use in chip-carving (Fig. 1). The picture shows the knife only half as large as its real size. It should be about five inches long including the handle. Mr. John Van Oost, who is an authority on this kind of carving, suggests that a shoemaker's-knife may be ground down to the proper shape (Fig. 2), or he says to buy a pattern-maker's-knife of the largest size.

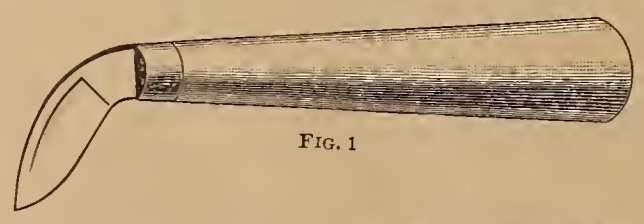


FIG. 1

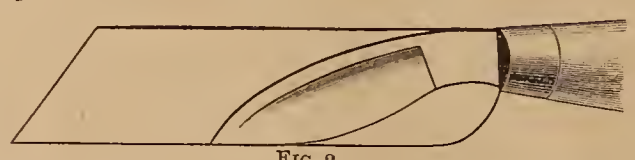


FIG. 2

You will have said when you read thus far, "Chip-carving is nothing but whittling," and that is true; it is artistic whittling.

It is necessary to select soft wood for this work; oak is too hard, and even walnut is difficult.

For first experiments try a very simple design on a pine board. It will be wise to exercise your prentice hand on several bands and rosettes. Do not make deep cuts. You wish to produce effects with as little labor as possible. When you decide what object you wish to decorate, for instance, a box or a picture-frame, have it made by a cabinet-maker, but do not let him fasten the parts together. Warn him also not to smooth the wood with sandpaper, because the sand will dull your knife. A picture-frame may be carved when the corners are fastened, but I can think of no other article which could be handled conveniently without being taken apart.

After the work is finished I would not advise any finish or stain to be applied to the wood. If the knife has been kept sharp the cutting will have a crispness that makes the light play agreeably on the different angles.

The illustration shows a mirror-frame in chip-carving (Fig. 3). The mirror is six inches by eighteen inches, and the frame is four and one fourth inches wide. K. K.

FIG. 3

PARTIES FOR SMALL CHILDREN

There never lived a child in this wide world of ours who would not receive with delight the suggestion of "having a party." There is something in the very word which is enchanting. Through the childish mind flash swift visions of white dresses, blue sashes, shiny shoes, "crimpy" hair, frosted cake, pink and white—oh, the delicious, never-to-be-forgotten perfume of that frosting!—candy and nuts and oranges, and the happy, noisy games, with a sweet, innocent vanity all the time in the pretty "dress-up" clothes which do not usually go with "tag" and "needle's-eye" and "snap-the-whip" and "drop-the-handkerchief."

Many children—and oh, the pity of it!—never know by actual experience the bliss of "having a party." The father is too poor or the mother is too busy or—or—or— The partyless child attends other children's parties, perhaps, or if not invited looks wistfully through the fence at the happy little guests, and wishes and wishes and longs and longs for a party of her very own.

A child's party need not be an expensive affair. Some of the most charming are the very simplest. The mother need not tire herself out in preparing for the small guests. Even a little effort is vastly appreciated by children, as every one who has the care of children knows. A "party" may be a delightful affair with only four or five little folks as guests, a table neatly spread out under the trees or on the porch, a plate of tiny biscuits or fancy-shaped sandwiches, thin and dainty, a pretty tea-pot, small enough to be easily handled by small hands and full of very weak tea, little inexpensive cups and saucers, a dish of glowing strawberries and a tempting pyramid of small, pink-frosted cakes. Strange how the little mind lingers long after upon the charms of that pink frosting and how sweet and party-like it tasted!

Children should not be encouraged to dress up too much for the happy little afternoon occasions their hearts delight in. A dainty white apron and bright hair-ribbons make a little lass look quite festive, and a fresh waist and a pretty tie add much to the every-day apparel of the small boy. The little hostess should be taught not to wish to dress more prettily than the poorest of her guests. Simplicity in all that pertains to childhood is one of its greatest charms.

There is one thing the little ones enjoy at a child's party, and that is the old-fashioned exercise of "speaking pieces." After they are arranged in a semicircle in the parlor or on the lawn one child after another steps forward as the mother of the little hostess directs, makes her modest bow and speaks her little piece. Every child can recite something for the general entertainment, if it is only about Mary and her historic lamb. I have noticed that the familiar ones from dear old Mother Goose are most smilingly received, and even the thrilling story of the mouse that ran up the clock is listened to with attention. It will generally be found that each child will want to speak another, and the exercise may continue until the little ones are "spoken out," or weary of the game, which they are not apt to do. To timid, nervous mothers who are always dreading an accident this is far better than wild, romping games in which a broken arm is a possibility.

Every mother who can find the time and patience—and most mothers can—should give her children a birthday party. Even if this occurs three or four times a year that is not too often. Most children, if given their choice between a handsome present and a party, will choose the party; and though it means more work for the mother, it means also a spirit of wishing to divide in the children.

The mother should take the trouble to teach the small giver of the party to meet her guests at the door, to greet them all alike—even the own particular chum must not receive more attention than the poorest, smallest child—to watch for their comfort and pleasure, and above all to "give up," which is sometimes so hard for little hosts and hostesses to do. In this way the foundation of true hospitality and gracious manners can be laid, and the training will have its graceful effect in years to come. If some inexpensive trifle such as would please the childish fancy can be given by the small maid to each guest as she departs, a sweet lesson in generosity can be taught. Her birthday will grow to mean to her a day on which to make others happy.

A child can be a child but once. Childish joys are among the memories which go with us to the end of life, and no sweet thought of a loving mother tenderly carried out is ever lost upon her child. A happier woman is she who at life's prime looks back lovingly to the good times "mother" made for her when she was a little girl. Happy the middle-aged man who takes time in his busy life to remember fondly the happy day, the wonderful day of delight and joy when he, as little host, entertained his first party!

HARRIET FRANCENE CROCKER.

HINTS ABOUT FLOWERS

Every one knows what a cheery, generous flower the nasturtium is when grown in the garden, but if you have never tried it as a house-plant you have a pleasure yet in store. About the first of August plant some nasturtium-seeds in a pot filled with rich garden soil, sink the pot in the ground in a sunny place, and if rains are not frequent give it water. As the vine grows train it on a trellis fastened in the pot. The plants will grow luxuriantly and begin to bloom in nine or ten weeks. Take the pot into the house before there is any danger of frost, water it once a week with liquid manure, and it will be a constant delight for many weeks. A good liquid manure is made from one ounce of guano in three gallons of water; or cow manure put in the bottom of a bucket and the bucket filled with water makes a good fertilizer for any house-plants. Be careful to not have the manure-water too strong, and use only a few teaspoonfuls at a time.

Last summer my Crimson Rambler rose was very much injured by mildew on the leaves. Early this summer it was again attacked, but by using flowers of sulphur the mildew has been checked, and the rose seems to be in a healthy, growing condition now. The sulphur must be dusted on the foliage. It is best to use a bellows made for this purpose, so as to get the sulphur on the under side of the leaves as well as the top. Dust the sulphur on early in the morning while the plant is moist with dew.

The surest way that I have found to combat the rose-bug is by patient hand-picking. For rose-slugs syringe the bushes thoroughly with a strong soap-suds made of whale-oil soap or common soft soap. Fine wood-ashes dusted on the bushes when they are damp is very distasteful to the slug.

I do not try to raise many annuals in my flower-garden, but Cosmos is one so easy of cultivation that I am never a season without it. Last spring I could not get the ground ready for it, except a small place, so I sowed the seed very thickly, and when the plants were about twelve inches high thinned them out and transplanted, pinching off the top of each plant. This pinching back is necessary if you would have stocky, branching plants, and the amount of bloom is very much increased thereby. Chrysanthemums should also be pinched back early in the season to make the plants bushy.

Last season just as the flower-buds were forming on my chrysanthemums I found them covered with the black aphis. Nothing seemed to disturb these little pests until I syringed the plants thoroughly with tobacco-tea. To make this, take a handful of tobacco-stems and steep them by pouring boiling water over them and letting it stand until the water is the color of strong tea. As soon as this tea is cold it is ready for use. This will also destroy the greenfly, which often infests plants, doing much damage.

Kerosene emulsion is recommended by the Department of Agriculture as an insecticide for all insects that suck the juices of plants. The soap formula for making the emulsion is one gallon of kerosene, one pound of whale-oil soap (or one pint of soft soap) and two quarts of soft water. If the whale-oil soap is used, dissolve it in the water by boiling, remove it from the fire, and add the kerosene; then mix it thoroughly by the use of a force-pump or garden-syringe, agitating it violently until well mixed and the consistency of cream. For use dilute the emulsion with fifteen to twenty parts of soft water, and apply with a spray-pump or garden-syringe. This emulsion will keep almost indefinitely, and can be diluted as required for use. If only a small quantity of emulsion is required and for immediate use, it may be made by the milk formula; that is, one part of sour milk, two parts of kerosene; agitate with an egg-beater or syringe until a thick, buttery consistency results, and then dilute with water for use as with the soap emulsion. To destroy the red-spider, that tiny insect that often works such havoc on house-plants, add one ounce of powdered sulphur to the gallon of diluted emulsion and spray the plants thoroughly.

Maida McL.

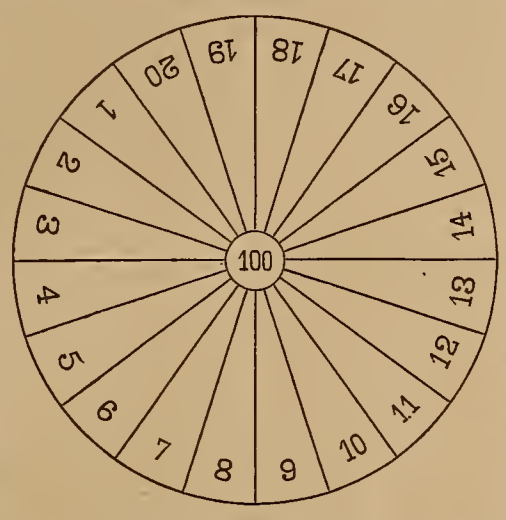
ESAU'S BIRTHRIGHT

This is an old game that my mother taught us children when we were little, and it has always been a great favorite with us. Why it was called by the name it bears in the family, and what the real name may be, I cannot say. The children here call it "tit-tat-to;" but that is no name for it, for it is entirely different from the game rightly so called.

To play it, draw a circle of any convenient size on slate or paper; in the center of this draw another very small circle, as shown in the diagram. Divide the space between into spaces by means of spoke-like lines drawn from the edge of the inner circle to that of the outer. Have twenty of these spaces. Fill each space with a number, having them run from one to twenty, and in the center place the number one hundred, denoting the limit of the game.

Two or more persons may play at the game. Let one person shut his or her eyes, poise a pencil over the diagram, and with eyes still closed touch the point of the pencil to the slate or paper holding the diagram. Hold the pencil still where it touches, and open the eyes to see what is the result. If he goes entirely outside of the larger circle, or touches a line, he scores nothing, and another player has his chance. If he comes down between two spokes the number there written will count him so much.

Tally must be kept on a slate or paper, and the players try their luck in turn until some one counts to one hundred, or until some lucky player comes down fairly inside the center circle, which gives him the game. The object in having the center circle so small is to make it more difficult to strike



inside, thus making it a matter of some difficulty to score one hundred at one play. Of course, each player aims to do this.

A pleasing variation of this game, to be used at evening gatherings, would be to trace the diagram on a large piece of muslin, say one yard square. Make the diagram large enough to almost cover the cloth, and trace it strongly with charcoal or colored chalks. Stretch the cloth across an open doorway and provide the players with darts made from a large cork through which a darning-needle has been thrust so the eye is entirely hidden, leaving the point protruding about three inches. Mark a line on the floor where each player must stand to throw, and see that all "toe the mark" when casting the dart.

One player throws at a time, as in the simpler game, and the scoring is done in the same way—wherever the dart strikes on the cloth giving the count to the player. Until the players become expert at the method it would be better to allow them to throw with eyes open, as there will be less danger of the dart flying off "at a tangent" and sticking in something else than the target. It is of course more difficult if played in this manner, and hence more productive of fun to older young people.

I would not allow small children or mischievous boys to try this variation of the game unless I wanted to run the risk of accidents.

May Myrtle Cook.

HYGIENE AND HEALTH

"Of all the methods of waste, that of overeating is the worst."

It had never occurred to me in exactly that light until the day that I first began a systematic study of that most important thing in all the life of the human family—hygiene and health. Have you ever taken the thought into earnest consideration? If you have, had the thought ever been given by you any special attention until health had fled and misery had reigned instead?

"We live to eat" has been too truly said. And from the high pedestal of right living, where to "eat to live" is the world-acknowledged right principle, we have drifted down to the lower sphere where, to satisfy an abnormal, acquired appetite, we scorn a self-denial and stoop to a self-gratification of appetite; but only to suffer in consequence thereof.

"In this land of plenty there is an enormous waste of food products." And as we stop to think we realize that through gormandization sufficient of foods are wasted to "feed the world" upon simple and healthful foods, and that as a penalty of disregard of the laws of nature the world is filled with people in all degrees and conditions of unhealthfulness, and great is the cry therefor. If greater attention was given to the sanitary conditions of homes throughout, to the food appointments of our tables, to the atmospheric conditions of our sleeping-apartments and the freshness and wholesomeness of our beds and bedding, and less attention given to the seemingly or apparently all-important subject of "What shall I eat and prepare to eat that will best suit my fastidious appetite?" how infinitely more blessed and blest would be the every-day lives of the families in our American homes, where food products are plentiful, and where the means of providing are not limited.

I have often stopped to think that to be financially poor were not the greatest calamity that could overtake one, by any means. The "just comfortably poor" are invariably in the most excellent of health, for their diet is simple and their lives are led in a natural manner. But we are upon the threshold of an eventful era in our lives as housekeepers and home-makers. Health literature is fairly thrust upon us, and as we read, if we do read (and it is to be hoped we all do), we cannot help seeing where we have stood and are standing in our own light and in the health light of our families, through inattention to our foods and homes, and in many ways that we had little dreamed of until we had broken down the barriers of ignorance through a careful perusal of those subjects of so vital importance to all the world.

What to eat and not to eat, and how to eat of the various perfect foods that we may safely eat, are items or topics upon which we have dwelt too slightly and even lightly, and there is room for great reform and change in the countless homes of our boastedly enlightened land. We have been slow to awaken and to understand our positions as home-makers of the universe, and we have indulged our own and the appetites of our families in a most detrimental fashion. And we are paying the penalty—the penalty all must pay who give so little heed to nature and her demands, and a heed so vast to things of lesser importance.

We have not stopped to think, perhaps, that we are literally starving in a land of plenty and in homes of plenty. In truth, the "plenty" has been too great, and the need for thought and study of foods and their uses and abuses has been correspondingly neglected. An overabundance of food material consumed is food material destroyed. But this is not all, nor is it the worst feature of the waste. In the overconsumption of foods, and especially of foods not rightly prepared, we have invited indigestion and its train of evil, health-destroying attendants.

We fail so ofteu to select the best of mind and body building materials, or to prepare those materials in a proper way. The more expensive foods are not the best. The simplest are often the more healthful, being the most readily digested. And good digestion of foods is the secret of perfect health. We eat and drink in a haphazard fashion. We give little attention to regularity in habit, whereas so very much depends upon it. We fry our food and then proceed to "bolt it," our careful health examiners tell and accuse us. Without regard to combinations of articles of diet best suited to be combined in the stomach for comfort and good health, we cater to the palate and mix the deadliest of compounds. And the only wonder remaining is that so many escape immediately fatal results therefrom.

It is not an infrequent occurrence for both men and women to mix, in the process of eating and digesting (or attempting to digest), meat, potatoes and onions, cabbage, cream and vinegar, pie, sauces and cake and various such articles. And then we wonder, when distress or unpleasant feelings follow the meal betimes, what can be the trouble, and why we should experience such sensations of uneasiness and unrest.

A practical physician and writer suggests that of such articles of food one take and run through a sausage-grinder the solids, and add to these the vinegar and milk and butter and cream, and subject them to a temperature of ninety-eight degrees, which is about the usual degree of the human stomach, and after a three-hours' wait see what one would think of accepting the mess as a meal. As he says, "You could not eat the filthy mess, and you know it. Is it any wonder," he continues, "that the alimentary canal revolts and refuses to accept such vile stuff as food? The life principle asserts itself for your good, and the whole mass is ejected. And so great is the offense to the stomach that even after the rubbish is thrown out it continues to strain as if to eject even the thought of the stuff; and you are very sick, and wonder why."

This should be proof sufficient that of food stuffs or materials there are combinations that are incompatible to each other. And we wonder that we dare, when once we stop to think of it all, thrust them into the stomach in so miscellaneous a manner. We must bear the brunt of our many mistakes in food selection and combinations. It may not be now; we may escape any serious inconvenience therefrom at present, but like "pay-day" the day of reckoning always comes, though it may be delayed for quite an indefinite time. Much depends upon inherent health and constitution; much also upon the manner in which one's time is employed. The field-laborer will mix his foods indiscriminately and not suffer the effects of so doing for a long time, perhaps; whereas one whose habits are sedentary, or whose employment of time bears no strain upon the physical being, will soon succumb to the after-train of evils that are sure to follow a trespass on the simple and regular laws of nature. In starving the body, or, in other words, in failing to furnish the sustenance required of the right nature and kind, one is starving and dwarfing the mind as well.

Those who have made a life study of the physical being tell us that the entire physical structure is torn down and rebuilt from head to foot at least once a year, and some assert that this entire change has taken place during every six months of human life. "Recent investigations," we read and understand, "have convinced specialists that the brain material is completely renewed every two months." Should not these things set us, as housewives, to thinking and to action as never before? For through our foods and manner of living we may make of ourselves what we would wish to be. Dietetic tables furnish us with a list of foods for brawn and brain, and common sense and teachings should be a guide to right preparation and combination of all food materials that enter into the daily bills of fare within our households.

In a following chapter we will consider these things, trusting to throw a trifle of intelligent light at least upon the subject.

Ella Houghton.

OLD-FASHIONED THINGS

"I thought you old ladies were napping?" said Agnes, as she stepped quietly into the north bedroom.

"Oh, no," I said. "Your mother is showing me her treasures;" for I couldn't help feeling that the pretty quilts and housebelongings which represented so much work and patience were really treasures. I got quite enthused over the sight, and felt I must go right home and make me an Irish-chain quilt of dark blue and white cotton. Such things in the home give such a tone of thrift. If our grandmothers had not made the pretty and useful things that have come down to us, it would seem as if we hadn't a grandmother. And why should not we in our turn make something to go down to another generation?

It was with a feeling of pride that I could point to several things about our home and tell of the years they had been with us. There is a feeling of reverence for those things which I never could set aside for the vandalism of the present day. Everything these days is cheapened so that they will not last any time. I didn't discover that my later-bought towels were not all linen until I was obliged to iron them one day. Upon inquiring of the merchants I found they called them "union" material. Well, if there is one thing I want truly linen, it is my towels; but even I could be deceived in them.

Old-fashioned things were so much better made, so true, that even after added years upon them they are still in fine condition; and a little restoring makes them better far than new stuff which is cheap—too cheap to be good. There is a quaintness, too, about them that has a charm, making the home that has old things seem distinct and individual. So if you have any old-fashioned pieces put away, bring them out and brighten up your home with them.

A young girl contemplating a home of her own should take delight in getting together things that will be bright memories of the home she has left. Get your girl friends together and have a "quilt-piecing"—of all the pieces you have of your frocks from a little girl up to your present ones. You will value it when you are in a home of your own. This can also be a "memory-party," letting each girl work her initials in the block she pieces. Then find "some older lady who does the work nicely" to quilt it for you; she will do it for one dollar a spool of thread used, you finding all the material.

B. K.

SORROW'S USES

The uses of sorrow I comprehend
Better and better at each year's end.

Deeper and deeper I seem to see
Why and wherefore it has to be.

Only after the dark, wet days
Do we fully rejoice in the sun's bright rays.

Sweeter the crust tastes after the fast
Than the sated gormand's finest repast.

The faintest cheer sounds never amiss
To the actor who once has heard a hiss.

To one who the sadness of freedom knows
Light seem the fetters love may impose.

And he who has dwelt with his heart alone
Hears all the music in friendship's tone.

So better and better I comprehend
How sorrow ever would be our friend.
—Ella Wheeler Wilcox.

PEACHES, AND HOW TO USE THEM

BEFORE we take up the preserving of peaches for winter use there are several ways of serving them which are nice, particularly if the fruit is not entirely perfect. All German and French housekeepers think a great deal of "compotes," as they call them, which are merely fresh fruits stewed. They make a nice dessert served cold with rice or blanc-mange, and are always admirable for children, even very young ones after they have enough teeth to chew, being all the better for a small amount of stewed fruit.

The best way to prepare your fruits is to make a syrup first. This is easily done by putting together in a saucepan three and one half cupfuls of sugar to two and one half cupfuls of water; stir until the sugar is dissolved, and when it has boiled five minutes, counting from the time it begins to bubble, it is done. Into this syrup drop the fruit carefully, piece by piece, so that they will not get crushed or broken. If you are using peaches they should be peeled and quartered. Let them cook until tender, then take the pieces out carefully with a skimmer and place in the dish you will use for serving them. Let the syrup boil down for a few minutes longer, to get a trifle thicker, and then pour it over the fruit. Cooked in this way the syrup will be very clear and the fruit semi-transparent.

MATRIMONY.—There is a dish much in favor in the South, called "matrimony," prepared from peaches, which makes a rich cold dessert. Pare and cut into pieces about two dozen medium-sized peaches; cover them with sugar and let them stand three or four hours; beat into them a quart of cream or rich custard, and freeze. The cream makes it taste better than the custard and is simpler.

PEACH LEATHER.—They also have a way in the South of preparing peaches for winter use in pies, dumplings, or just stewed—peach leather they call it. Ripe peaches are skinned, mashed and pressed through a coarse sieve. To four quarts of pulp add one quart of good brown sugar; mix them well and boil for about two minutes. Spread the paste on plates and let it dry in the sun. When the cakes are dry dust some sugar over them, and keep them in stone jars until you are ready to use them.

PEACH MARMALADE.—Take very ripe peaches, skin them and remove the stones. A pound of sugar to a pound of fruit makes a good marmalade, but the best is made by using one and one half pounds to one pound of fruit. After the peaches have remained in the sugar some hours boil them rapidly for fifteen or twenty minutes until they look clear. Strain through a sieve and fill your glasses. Made this way the marmalade has the transparency of jelly.

MARMALADE (for tarts, filling for layer-cake or turnover pies).—Skin and cut up small about six pounds of peaches. Crack the stones, blanch the nuts and mince them fine; add six pounds of peaches, put them into your preserving-kettle, and put over a slow fire; stir steadily, and mash up all the pieces. When boiled thick and clear put away in glasses or jars. The kernels give a pleasant flavor.

PRESERVED PEACHES.—In all receipts which necessitate the removal of the skins of peaches the best way to do is to fill a wire basket with the fruit, immerse it for a moment in a panful of boiling water, and the skin will rub off easily. When the skins are off, divide the peaches and take out the pits. Throw the peaches into cold water, which will prevent them turning brown. Put into a preserving-kettle three quarters as much sugar as you have fruit, adding a little water to dissolve it. Remove the skum that may rise, and put in as much fruit as will float, but do not crowd it so that it will break. As the pieces become tender and clear place them in jars which have been scalded out, and put more fruit in the syrup. When the fruit is all cooked, fill the jars full with the hot syrup, and seal up. See to it that both covers and rubbers have been put into hot water, too. Some people add a tablespoonful of brandy to some of the jars, but the brandy is not needed for preservative purposes if you do not care to use it.

SWEET PICKLED PEACHES.—These make one of the richest sauces for meat which we have, and are very easily done. Many people leave the skins on and the stones in, but it is better to remove the skins if they are specked or tough. Allow about three and one half pounds of sugar to seven pounds of fruit. Put sugar into the kettle with a quart of vinegar and two ounces of cloves and allspice and some sticks of cinnamon. After the sugar is dissolved boil them for about five minutes. Stick a clove into each peach, and put a few peaches at a time into the boiling syrup. When they are tender and look clear, take them out, put them into jars, and cook others. When the syrup is reduced to about one half pour it over the peaches in the jars, and seal up.

N. M.

A SELF-IMPOSED TASK

Now, dear, you must try to be more careful," said Mrs. Spencer, as she handed Bobby his trousers with their fresh patch, so neatly applied that it would not be noticed unless one looked very closely. "I can't spend any more time on these right away; I've a few other things to do besides mend your trousers."

Bobby laughed. "Yes, mama, I know it. Thank you for fixing 'em so nice. I'll try to be careful, but if I do tear 'em again to-day I'll mend 'em myself." And he hurried up-stairs to put them on in place of the dilapidated pair which he had been wearing while waiting for these to be repaired.

Bobby was pretty careless, and he knew it. He couldn't bear to wear anything with a hole in it, either, and mama wouldn't have wanted him to, but she did get almost discouraged sometimes trying to keep him whole and clean.

Pretty soon there was a rush down the stairs, followed by a whoop, which told that Bobby had spied one of his chums somewhere within the radius of half a mile. The mother smiled patiently, and lovingly, too. "Bless his dear heart!" she said to herself. "He's pretty noisy and careless, but I don't know how I could live without him, after all."

In less than an hour she heard him come in and go quietly up-stairs. She expected to hear him rush down again in a few moments, but half an hour passed and he did not come—with a rush or in any other way. Then she became a little uneasy, and went up-stairs. His door was shut.

"Bobby," she called, gently.

"Yes'm," came in subdued tones from within.

"May I come in, dear?"

"I—I guess not just now, mama; I'm busy," Bobby answered, and she went down again, quite mystified.

Another half hour passed, and still there was no rush of merry feet down the stairway. But now it was dinner-time, and in response to mama's call Bobby appeared. He looked depressed, and he wore his best trousers. All at once it came into Mrs. Spencer's mind what the trouble was. She didn't say anything, however, and after dinner the little boy, who had been surprisingly quiet during the meal, went up-stairs again with a very sober face. Mrs. Spencer felt sorry for him, but decided to wait awhile before she interfered in any way. When three quarters of an hour had elapsed without Bobby's reappearance she went up-stairs once more.

"Can't mama come in now, dear?" she inquired outside the closely shut door.

There was a moment's silence, then Bobby said, "Yes'm; you may if you want to."

She opened the door. Bobby was sitting on the side of the bed with the perspiration running down his flushed face. He looked up with a faint, discouraged smile from his work on an ugly three-cornered tear in the unlucky trousers.

"I was climbing over the fence, and there was a nail in it I didn't see quick enough," he explained, humbly. "I said I'd mend 'em, you know, and I hated to ask you to again, anyway. I thought I could do it all right, but it's pretty hard work, and I'm afraid they won't look very good, either. I don't see how you mend 'em so nice."

Mrs. Spencer took the trousers out of the little worker's hands, with a kiss. "Well, dear," she said, cheerily, "you have done your best to help me and keep your word, anyway. Now you needn't spend any more time over them, and if you'll try to be careful you may keep those on the rest of the day."

Bobby's face grew bright. "Oh, I'll be just as careful!" he exclaimed, adding, with a funny little laugh, "I guess I'd better not promise to mend 'em if I should tear 'em, though." And in another minute he was speeding down the stairs as merrily as ever.

Mrs. Spencer carried the trousers away and sat down to her task, but she paused with the scissors suspended above the funny bit of mending. She couldn't bring herself to rip out those big, uneven stitches. "I'm going to keep these just as they are," she finally declared; "they wouldn't last much longer, anyway, and I'll get him a good stout pair this very afternoon to take their place."

Bobby is grown up now, but among her treasures Mrs. Spencer still keeps a little pair of half-worn trousers, in which a big rent half filled with straggling stitches is a very conspicuous feature. C. A. PARKER.

A HOME FOR EPILEPTICS

The first effort for the relief of epileptics was made by Pastor Von Bodelschwingh, in Bielefield, Westphalia. The story of the rise and growth of an industrial colony there, and the work accomplished in lifting these suffering people from helpless misery into active, hopeful, self-supporting men and women, is as suggestive as it is marvelous. There were no imitators of this plan until the state of Ohio opened a hospital at Gallipolis, and more recently the state of New York established the Craig Colony in Livingston county, purchasing of the Shakers eighteen hundred acres of land in the Genesee valley. The Shaker houses have been remodeled and others added, making in all a substantial settlement of brick buildings fitted up with modern comforts and conveniences, lighted by electricity and heated by steam.

Much thought is given to bringing cheer into the life of these hopeless and helpless patients. A south porch inclosed with glass is provided for sun-baths; the dormitories, large, airy and scrupulously clean, are flooded with light, broad halls are hung with attractive pictures, and the verandas look over a pleasant and friendly landscape. Smoothly kept lawns, fine gardens, green fields, orchards, flocks of lazy sheep, and distant blue hills glistening here and there with village church-spires—these are the surroundings, as tranquil as they are beautiful.

Systematic, healthful work, which quickens the circulation, aids digestion and induces sound sleep, is considered one of the best remedies for epilepsy. Accordingly we find the epileptics, under the care of nurses and competent men and women, sewing, printing, gardening, scrubbing, cooking, washing, plowing the fields and gathering the harvests; in brief, supporting themselves. The patient once more feels the thrill of an active mind sending out currents of fresh vitality to strengthen and re-create the body, while the strengthened body in return gives new vigor to the mind. Cheerfulness is restored, ambition awakened, and life is once more worth the living.

As rapidly as possible industrial training will be provided for boys in such trades as carpentry, cabinet-making, painting, shoemaking, tailoring and iron-work, while the women will have departments in rug-making and willow-work. Suitable schools will also be provided.

Dr. Spratling, the physician in charge, makes a careful study, not only of the results, but of the causes of epilepsy, and his statistics show a large per cent of the patients to be children of alcoholic or half-starved parents. This gives emphasis to the fact so well known to every student of sociology that our country is suffering from the two curses of intemperance and indigestion, both due to the ignorance of our middle and lower classes in preparing wholesome and nourishing food.

It is startling as a revelation to know that while our cattle and sheep are improving in breed, and even our garden stuffs are richer and more splendid than a hundred years ago, our men and women are degenerating at a tremendous rate. The proportion of imbeciles is three times as great to-day as fifty years ago. In New York state alone there are twelve thousand epileptics. All over the land our large insane asylums are black finger-marks pointing to what shall be. Are we as a people awakening to the present need in the education of our children? With practical industrial training in our schools shall we lay the foundations of a healthful and wholesome home life, or shall we continue with settlements and asylums simply to alleviate a drop or two in this great ocean of misery, and call ourselves humane?

FRANCES BENNETT CALLAWAY.

THE CHILDREN'S MONEY

May I send a sort of supplement to "An Allowance for the Children," written by a well-beloved schoolmate of the happy old academy days? Some such allowances are all the time being broken into, borrowed from, partly paid back, but never settled fairly. If you mean to make independent, businesslike children, do not always be meddling with their little treasures. When a mother or older sister wants change or a little money to use, how easy it is to rob Willie or Carrie or some one! You do not like the word rob. But some day when the child goes to count over his money and it is not there, he is in great trouble financially, for if he has saved it out of an allowance, or earned it, he has done it by self-denial. It is well to encourage a child to put his money in a savings bank—most of the banks requiring a dollar to start with.

Hattie's father was a farmer, and did not think he had pennies or nickels to give her a regular allowance, but when she was six years old gave her a calf for her very own, as she said. After awhile the father had a chance to sell the calf for six and one half dollars in trade, but he never paid Hattie the money. The father used to laugh when she talked about it, and said she had many times more than that in her clothing and care. Still, when she was well grown up she felt that her father owed her that amount. If she had had it and used it she would have seen how small an amount six dollars really is: yet had she saved it, it would have added to itself like a moss-covered stone, until the interest pennies added would have been quite a pleasure to her.

A mother among my friends who has a little daughter gives her six cents a week, requiring her to pay her Sunday-school penny out of it. Very early that mother fell into the habit of making the child pay fines out of the money for any misbehavior. Sometimes for weeks ahead the allowance was "garnisheed." One morning Bessie had to bring to her mother two cents before breakfast, as a fine for something. As she handed the money she said, bitterly, "I think this is a very expensive family to live in." Bessie was naturally as good a child as most are, yet that course, or something like it, inclines to deceit and even white lies.

I know a boy who had an allowance from early childhood. After attending district school a short time, as soon as he was old enough he set to work on the farm with his father. He soon was earning wages, though he never had any money. The boy was old beyond his years, and was a natural farmer and money-maker, so his father said. They raised sheep and cattle and sent them to market. The father often gave the son a colt to raise or a fine cow for his own. The boy kept his own accounts strictly, charged himself with all the money spent on clothing or his necessary expenses. Before he was twenty-one his father said he had earned and saved a thousand dollars; that is, with the sale of stock belonging to the boy. His father never paid him a bit of money. When the boy was past twenty-one his father and he had a talk, and his father advised his going off and starting to work for himself, which he did.

That father was not a bad man, nor dishonest as the world counts it; he simply "played" money with the boy. Such fathers and mothers wonder how their boys and girls go wrong, or where they could get any line of trickiness or dishonesty as an inheritance.

Do you say I must know a strange company of people? No, I do not; they are plain, every-day people, whom any one sees if they are only thinking of those things or studying methods with children and young people.

I heartily indorse the plea for an allowance for the children, even among the poorest people. If you have little money, give a few cabbage-plants or tomatoes or fruits or nuts. While spending a night at Point Breeze, a resort on Lake Ontario, just lately, I found a fisherman father who when setting nets had one for his boy. I asked him what he did with the money. He replied that he gives the boy carefully the money from the fish in his net. A child will soon sell his plants or what is given to him.

With this plea for an allowance I urge the strictest honesty and businesslike dealing with children, and do treat them courteously. They understand much earlier than you think. Remember, the parent is debtor to the child. I am sorely tried with people who say, "My child owes me so much." Of course, in a well-ordered home there is no burden of debtorship, for debts are paid as they become due to the children, and the parent receives credit in the love and healthy growth of those so dear to him.

MARY JOSLYN SMITH.

WORTH LIVING

Is life worth living? Yes, so long
As there is wrong to right,
Wail of the weak against the strong,
Or tyranny to fight;
Long as there lingers gloom to chase,
Or streaming tear to dry,
One kindred woe, one sorrowing face
That smiles as we draw nigh;
Long as a tale of anguish swells
The heart, and lids grow wet,
And at the sound of Christmas bells
We pardon and forget;
So long as Faith with Freedom reigns
And loyal Hope survives,
And gracious Charity remains
To leaven lowly lives:
While there is one untrodden tract
For Intellect or Will,
And men are free to think and act,
Life is worth living still.

—Alfred Austin.

TESTS OF FRIENDSHIP

RARE indeed is that friendship which can give or receive advice contrary to our own predilections. How often do we hear people say that they think this or that is doing a serious injury to one they love, and yet feel afraid to say so to the person most in danger. How rarely do we meet a man or woman who gladly receives any word of disapprobation of what they have planned or arranged.

He who has reached that place from which he can find it possible to say to us lovingly and without dogmatism that we are wrong, and without irritation or argument calmly discuss the pros and cons of a doubtful step, has come very near a right to be called "a perfect man;" and he who has attained that beatific condition in which this advice and suggestion are welcomed and listened to with rational and grateful respect has to fear nothing from the attacks of evil spirit incarnate or immaterial. If ever we find a sure test of the depth and strength of the bond of friendship this surely should be its basis: "Can I bear that my friend should tell me I was wrong?" Yet what could be a more natural and vital outcome of strong and loving regard than the suggestion of coming danger to those who are threatened? Let two friends pass through this experience together and remain unruffled, and they need never fear other rupture of their uniting love.

Especially do women lack the gift of bearing what they are only too ready to call "interference." That they are overindulgent to their children, or mistaken in their discipline or regimen; that they even fail to have chosen the most becoming dress for their danghter or the best school for their son makes them not unhappy, but angry and indignant. The merest intimation that some change might benefit the development of a child, or that he has a fault, will often obliterate the remembrance of years of steadfast kindness and end a friendship of great value.

Althongh when we talk of this peculiar expression of human nature it sounds exaggerated and in a way incredible, it is of such easy proof and so daily in evidence that there is no gainsaying it. What we desire of our friends is that they should always agree with us, constantly approve and admire us, and let us adhere to our worst follies without remonstrance.

It seems possible that if we looked the matter "squarely in the face," and weighed the value properly of a disinterested, affectionate opinion, when given by those we value most highly, we might lift friendships above the common level of a pleasant companionship into a helpful partnership.

A dangerous phase of very close feminine friendships develops when confidences are disloyal to the master of the house. Let us discuss our own foibles, our own mistakes, share our hopes, our ambitions, our interests, our amusements, but let us shield our husbands from discussion. If our friend confides our revealings to her spouse, as, alas, friends will, we cannot complain; we ran the risk voluntarily and of our own free will; but for him whom we are bound to honor and obey, let us take care that we do him no harm in our search for sympathy and eager craving for recognition and comprehension.

Let the deepest confidence, the most nnguarded trust about ourselves, cement our friendships, but let our husbands' lives be sheltered from any scrutiny they do not themselves invite. What exasperated us this morning, while smarting under disappointment or irritated by contradiction, may seem a very grave and formidable error when talked of in the heat of wounded feeling; by next week we will see that reason or necessity ruled the adverse action, and that we have robbed him we love best of a friend by giving an impression we cannot afterward eradicate.

And if our friendships are to be precious, let them be inviolable. Let us beware of half-confidences and half-way fidelity to trusts. There is no excuse for telling other people's secrets to our husbands or wives simply because we enjoy sharing our thoughts and rousing their interests. That which a friend has said in our ears is a trust as truly and in the same sense as money placed in our hand or a jewel confided to our safe keeping. It is not less real because it is immaterial, and we are just as responsible, as custodians, as if we were strong boxes in a safe-deposit vault.—New York Evening Post.

FAMILY WORDS FADING AWAY

There are a few grand old words connected with the family that are fading away, and which we all ought to do our best to restore to daily use. They are "kin," "kinsman," "kindred," "kinsfolk." They come from the oldest root in the whole Aryan stem, and they should not be pushed out of meaning and use. But "kin" is nearly gone. "Kind" and "kindly" have changed their original significance, and instead of "kindred" and "kinsfolk"—words with a delightful meaning—we have "relations," a word which may mean anything or nothing. For we stand in all kinds of "relations" to our family and to the whole world. How this undesirable change has come about Professor Muller or Dean Trench may perhaps find out for us; we only recognize the fact.

But whether "kindred" or "relations," they are our miniature world, and the discipline involved in this connection is very complete and wonderful. What faith and patience and forbearance we show to the faults that we have been used to from infancy! Family affection is a divine thing, for it enables us not only to tolerate, but to love those whose action we are obliged to condemn; and it even blinds us so far as to make us excuse in our own what we condemn in others. We think of and we talk of and we feel toward our kindred as if they were different beings to the rest of mankind. If they are wronged, how bitterly we feel it; if they fail in anything, we are ready to blame any one and any event rather than believe they have failed deservedly. In the bottom of our hearts we may not approve their conduct, or even enjoy their society, but kin is less than kind when it is willing to admit the fact.—Amelia E. Barr, in Christian Herald.

THE PEACE OF JESUS

Some people are apt to belittle the peace of Jesus because they have peace of life. They have no bitter disappointments, no cruel wrestles, no crushing afflictions, no fiery temptations. The world has dealt kindly by them, and they have fitted into their environments. Moments there are when the sailors of the deep envy those that sail in the smooth, sheltered waters because they have not been driven to and fro on stormy seas and been in danger of the turgid swells. Other moments the sons of tribulation pity those unfortunates who have never seen the great billows lie down as a dog chidden by his master and God turn the storm into a calm.

One half of the Bible is a closed book to them that sit at ease becanse only a pierced hand can open the pages. The promises are for them whose hearts are sore; the invitations are to them who hunger. Jesus' peace was the best of all gifts to that handful of broken men in the upper room, whose first step would be in the darkness, but it may not seem any great thing to the favorites of this world.

Yet it is not wise for any one to make too much of an outward peace, dependent on health of body, and the goods that are kept in barns, and suffrages of the multitude, which to-day cries "Hosanna," and to-morrow "Crucify," and on the whims of fickle, selfish people. Let a man be as far-seeing, accommodating, politic, unscrupulous as may be, he cannot hope always to escape disaster, for this peace is as uncertain as the lovely Mediterranean. One day you look out through the motionless foliage on a still expanse of blue, and the next morning the orange-blossom is strewn upon the ground and the spray is dashing on your garden wall. "As the world giveth."—Ian Maclaren.

THINGS EVERY BIBLE-READER SHOULD KNOW

A day's journey was about twenty-three and one fifth miles.

A Sabbath-day's journey was about an English mile.

Ezekiel's reed was nearly eleven feet.

A cubit was nearly twenty-two inches.

A hand's breadth is equal to three and five eighths inches.

A finger's breadth is equal to about one inch.

A shekel of silver was about fifty cents.

A shekel of gold was eight dollars.

A talent of silver was five hundred and thirty-eight dollars and thirty cents.

A talent of gold was thirteen thousand eight hundred and nine dollars.

A piece of silver, or a penny, was thirteen cents.

A farthing was three cents.

A mite was less than a quarter of a cent.

A gerah was one cent.

An ephah, or bath, contained seven gallons and five pints.

A hin was one gallon and two pints.

A firkin was about eight and seven eighths gallons.

An omer was six pints.

A cab was three pints.—The Bible-Reader.

NO SEPARATION

The misgiving which will creep sometimes over the brightest faith has already received its expression and its rebuke: "Who shall separate us from the love of Christ? Shall tribulation, or distress, or persecution, or famine, or nakedness, or peril, or sword?" Shall these "changes in the physical state of the environment," which threaten death to the natural man, destroy the spiritual? Shall death, or life, or angels, or principalities, or powers, arrest or tamper with his eternal correspondences? "Nay; in all these things we are more than conquerors through Him that loved us. For I am persuaded that neither death, nor life, nor angels, nor principalities, nor powers, nor things present, nor things to come, nor height, nor depth, nor any other creature, shall be able to separate us from the love of God, which is in Christ Jesus our Lord."—Henry Drummond.

THE SECRETS OF LONG LIFE

Eight hours' sleep.

Sleep on your right side.

Keep your bedroom window open all night.

Have a mat to your bedroom door.

Do not have your bedstead against the wall.

No cold tub in the morning, but a bath at a temperature of the body.

Exercise before breakfast.

Eat little meat and see that it is well cooked.

Eat plenty of fruit to feed the cells which destroy disease germs.

Live in the country if you can.

Watch the three d's—drinking-water, damp and drains.

Have change of occupation.

Take frequent and short holiday.

Limit your ambition, and keep your temper.

A PRAYER

Oh Thou whose name is Love, who never turnest away from the cry of Thy needy children, give ear to my prayer this morning. Make this a day of blessing to me, and make me a blessing to others. Keep all evil away from me. Preserve me from outward transgression and from secret sin. Help me to control my temper. May I check the first risings of anger and sullenness. If I meet with unkindness or ill-treatment, give me that charity which suffereth long and beareth all things. Make me kind and gentle toward all, loving even those who love me not. Let me live this day as if it were to be my last. Oh, my God, show me the path that Thou wouldst have me to follow. May I take no step that is not ordered by Thee, and go nowhere except Thou, Lord, go with me. Amen.—Ashton Oxenden.

THE RESPONSE

Give me an eye to others' failings blind;
Miss Smith's bonnet's quite a fright behiud!

Wake in me charity for the suffering poor:
There comes the contribution-box once more!

Take from my soul all feelings covetous;
I'll have a shawl like that or make a fuss!

Let love for all my kind my spirit stir—
Save Mrs. Jones; I'll never speak to her!

Let me in truth's fair pages take delight;
I'll read that other novel through to-night!

Make me contented with my earthly state;
I wish I'd married rich; but it's too late!

Give me a heart of faith in all my kind:
Miss Brown's as big a hypocrite as you'll find!

Help me to see myself as others see;
This dress is quite becoming unto me!

Let me act out no falsehood, I appeal;
I wonder if they think these curls are real!

Make my heart of humility the fount;
How glad I am our pew's so near the front!

Fill me with patience and strength to wait;
I know he'll preach till our dinner's late!

Take from heart each grain of self-conceit;
I'm sure that gentleman must thiuk me sweet!

Let saintly vlsions be my daily food;
I wonder what they'll have for dinner good!

Let not my feet ache on the road to light;
Nobody knows how these shoes pinch and bite!

In this world teach me to deserve the next;
Church out! Charles, do you recollect the text!

—Christian Register.

THE FADING OF THE SUBSTANCE

JOHN BILLUS, I found this photograph in the inside pocket of an old vest of yours hauging up in the closet. I'd like an explanation. Whose is it?"

"Can't you see it's an old picture, Maria? What's the use of stirring up memories that—"

"I want to know whose picture that is!"

"Rather a pleasant-faced girl, isn't she?"

"I want to know her name!"

"No jealous fury in that countenance, is there?"

"Whose is it?"

"It's a portrait of a girl I used to think a great deal of, and—"

"Her name, sir!"

"Well, you sat for it yourself, Maria, about nineteen years ago; but, to tell the truth, I always did thiuk the 'pleasing expression' was a little overdone. Put on your spectacles and look at it again, and then compare it with the reflection in that mirror over there, and see—what are you getting mad about?"—Chicago Tribune.

HIS FAMILY DOCTORS

When the new boy got iuto the school-room he was, of course, pestered with numerous questions by the other scholars as to his name, his parent's profession, the amount of his pocket-money, and various other matters about which boys are curious.

"Who's your family doctor?" asked a big lad.

"Ain't got none!" was the prompt if ungrammatical reply.

"How jolly!" responded the questioner. "Why, you didn't have no medicine to take!"

"Didn't I?" was the sarcastic reply. "That's all you know. Why, my father's an homeopath, mother's an allopath, my sister Maggie's joined the ambulance, grandfather believes in resuscitation from drowning, grandmother goes in for every quack medicine that's advertised, my uncle Sandy's a horse-doctor, and—" with a pathetic tone—"they all of them experimented on me!"

That boy got the sympathy he desired.

A DISSERTASHUN ON BICIKELS

Bicikels hav kom to stay and the Darweanyun thery is spurting rite ahed. Bicikels are good lnstrucktors; they teech u the onsirtainteas ov life, and that it is ezier to lern a hen to crow than to keep ur eqlibrum on a kontankrns bike. Mules ar amibility pursonified beside sich. I rid one ouse, leestwise I hired it for that purpus; but me and the bike disagreed. To dollars and a haf for repalrs and a dlsinclinashun on mi part to sit down much, was the sekwel.

Bicikels beet awl matrimonial burows hollow. Thare's more matches made a-biking thau ennywhare else. With ur best girl on a tandum ur chansez ar to to one. Go ahed, yung man, and pop. Procrashtinashun is a unrelieabel fello and a punktured tier is not kondosieve to spooning.

Biking xpands the muscels, espeshally when the masheen kolapsiz ahout ate miles from hom and u hav to foot it back.

AN EVASIVE ANSWER

"John," said a clergymau to his factotum, "I shall be very busy this afternoon, and if any one calls I do not wish to be disturbed."

"All right, sir. Will I tell them you're not in?"

"No, John. That would be a lie."

"An' what'll I say, yer reverence?"

"Oh, just put them off with an evasive answer."

At supper-time John was asked if any one had called.

"Yes, there did," he said.

"And what did you tell him?" asked the clergyman.

"I gave him an evasive answer."

"How was that?" queried his reverence.

"He asked me was yer reverence in, an' I sez to him, sez I, 'Was your grandmother a hoot-owl?' "—Loudon Answers.

SAFE

First saleswoman—"Did you know that Clara Lacey is engaged to Mr. Strutter, the floor-walker?"

Second saleswoman—"You don't say!"

First saleswoman—"Yes; and he is awfully jealous of her. He had her transferred from the necktie-counter to the bargaln-counter."

Second saleswoman—"Goodness! Why the bargain-counter?"

First saleswoman—"Because no men go there, you know!"—Puck.

SOCIETY NEWS IN INDIA

We learn from an India paper that Mr. and Mrs. Thambynayagampillai are now on a visit to Kovikudyirruppu. Mr. Thambynayagampillai is the son of Judge G. S. Arianayagampillai and son-in-law of Mr. A. Jambulingammudelliar.—Westminster Gazette.

LATE IN THE EVENING

Grandma Newcomb (hearing that her son after breaking his leg had come down with measles)—"I wonder what will come next?"

Dorothy (sleepily)—"To-morrow, I dess, grandma."—Judge.

LITTLE BITS

Although a woman may possess
The daintiest foot in town,
You'll find it quite immovable
When once she puts it down.

Little boy (who has just had a tumble)—"Papa, I think you can ride the wheel best when you ain't on it."

She is a little tot, but old enough to ask questions. Recently she was out ridlng with her mother, and in passing a field noticed several cows grazing. "Say, mama," said she, "do cows ever blow their horns?" Whereupon the mother nearly fainted.—Elmira Gazette.

A young physician was once called in by a gentleman who had a very sick mother-in-law. After looking into the case carefully the young M.D. called the gentleman aside and said:

"Well, the only thing I can suggest is that you send your mother-in-law to a warmer climate."

The man disappeared and came back with an ax a moment later, and exclaimed:

"Here, doctor, you kill her. I really haven't the heart."—Argonaut.

A LOW WAGON AT A LOW PRICE

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Co., Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, that is only 25 inches high, fitted with 24 and 30 inch wheels with 4-inch tire.

This wagon is made of best material throughout, and really costs but a trifle more than a set of new wheels and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

PATTERNS OF SEASONABLE GARMENTS

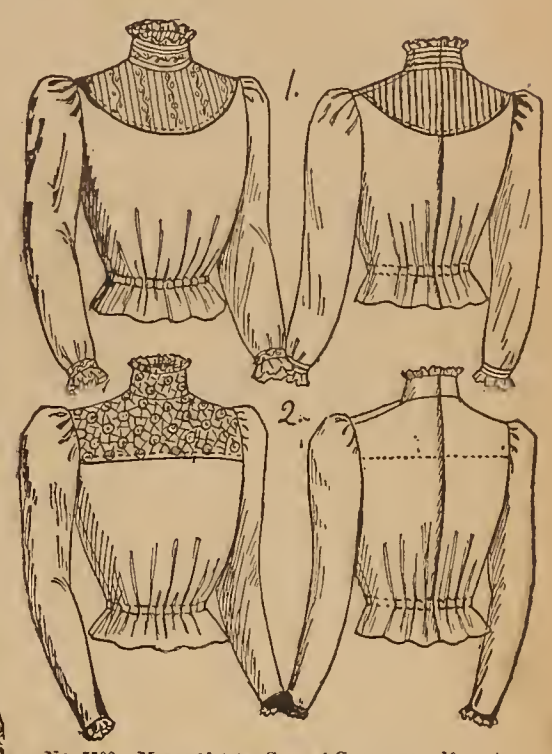
We offer this month a selection of up-to-date patterns suitable to the season. The patterns are full and complete, being especially suited for home dressmaking.

No. 7710.—Ladies' Yoke Waist. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.
No. 7712.—Ladies' Straight Gathered Skirt. 11 cents.
Sizes, 22, 24, 26, 28 and 30 inches waist.

No. 7705.—Ladies' Round-yoke Shirt-waist. 10 cents.
Sizes, 32, 34, 36, 38, 40 and 42 inches bust.

No. 7719.—Misses' Circular Skirt, with Pointed Overskirt. 10 cents.
Sizes, 12, 14 and 16 years.

No. 7720.—Girls' Blouse Costume. 11 cents.
Sizes, 6, 8, 10 and 12 years.



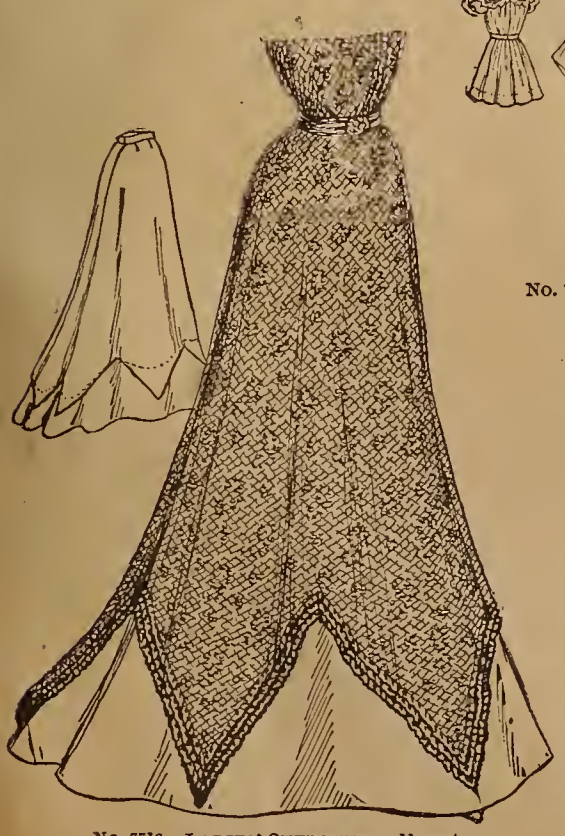
No. 7706.—Misses' and Girls' Guimpes. 10 cents.
Sizes, 4, 6, 8, 10, 12, 14 and 16 years.

No. 7723.—Ladies' Bolero Night-gown. 11 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.

No. 7724.—Girls' Dress. 10 cents.
Sizes, 4, 6, 8 and 10 years.

No. 7715.—Girls' Dress, with Scalloped Bertha. 11c.
Sizes, 6, 8 and 10 years.

No. 7711.—Boys' Blouse Suit. 10 cents.
Sizes, 4, 6, 8 and 10 years.



No. 7716.—Ladies' Overskirt. 11 cents.
Sizes, 22, 24, 26, 28 and 30 inches waist.

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These patterns retail in fashion bazaars and stores for twenty-five to forty cents each, but in order to increase the demand for our paper among strangers, and to make it more valuable than ever to our old friends, we offer them to the lady readers of our paper for the low price of only ***10 Cents Each.***

Full descriptions and directions—as the number of yards of material required, the number and names of the different pieces in the pattern, how to cut and fit and put the garment together—are sent with each pattern, *with a picture of the garment to go by.* These patterns are complete in every particular, there being a *separate* pattern for *every single piece* of the dress. All orders filled promptly.

For ladies, give BUST measure in inches. For SKIRT pattern, give WAIST measure in inches. For misses, boys, girls or children, give both BREAST measure in inches and age in years. Order patterns by their numbers.

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To get BUST and BREAST measure, put the tape-measure ALL of the way around the body, over the dress, close under the arms.

Special price of each pattern 10 cents.

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View on the Pasig River, in the Upper Part of the City of Manila

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* * * * * *

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"SAMANTHA AT SARATOGA" and "SAMANTHA AMONG THE BRETHREN"

These two excruciatingly funny books by that clever humorous writer, **"Josiah Allen's Wife,"** are decidedly her very best productions, and they are sure to

...MAKE YOU LAUGH UNTIL YOU CRY

"Samantha at Saratoga" was written under the inspiration of a summer season 'mid the world of fashion at Saratoga, the proudest pleasure resort in America. The book takes off the follies of fashionable dissipation in the author's inimitable and mirth-provoking style. The story of Samantha's "tower" to Saratoga, accompanied by her "wayward pardner," is extremely funny.

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"Oh! argue and dispute with a dyin' man!"

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	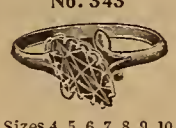				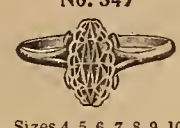			
Sizes 4, 5, 6, 7, 8, 9, 10	Sizes 4, 5, 6, 7, 8, 9, 10	Sizes 4, 5, 6, 7, 8, 9, 10	Sizes 5, 6, 7, 8, 9, 10, 11	Sizes 5, 6, 7, 8, 9, 10, 11	Sizes 4, 5, 6, 7, 8, 9, 10	Sizes 3, 4, 5, 6, 7, 8, 9	Sizes 3, 4, 5, 6, 7, 8, 9	Sizes 4, 5, 6, 7, 8, 9, 10

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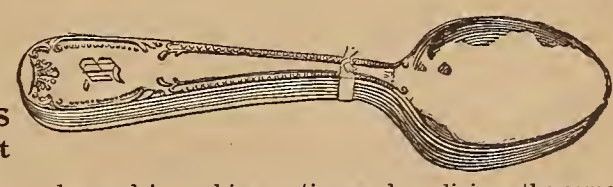
No. 350—Three Pearls; an attractive ring.

NOTE that the above-named stones are imitations and not real Diamonds, Garnets, Emeralds, Sapphires, Turquoises, etc.

TO FIND THE SIZE OF THE RING YOU WEAR, take a narrow strip of stiff paper that just meets around the finger you want to fit; lay this strip on measure shown here, one end at A; the other end shows the size to order. Each ring is made in seven sizes only. Always give size you want.

A SET OF SILVER-PLATED SPOONS...

Either TEASPOONS, DESSERT-SPOONS or TABLESPOONS Just like this small cut

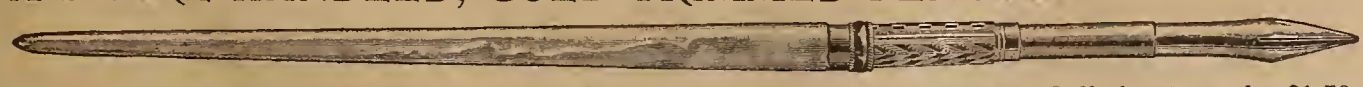


This silver-plated ware can be used in cooking, eating and medicines the same as solid silver. Because we buy our silverware direct from the factory in enormous quantities (nearly 200,000 pieces last season), and sell it without profit in order to get subscriptions and clubs, is the reason why we can afford to offer such bargains.

Pure Coin-Silver Plating The base of this ware is solid nickel-silver metal, which is the best white metal known for the base of silver-plated ware, because it is so hard and so white that it will never change color and will wear for a lifetime. The base of all this ware is plated with the full STANDARD amount of pure coin-silver.

Will Stand Any Test To test this silver-plated ware use acids or a file. If not found to be plated with the full STANDARD amount of pure coin-silver and the base solid white metal, and exactly as described in every other particular, we will refund your money. If returned to us we will replace free of charge any piece of ware damaged in making the test. ALL OF THE WARE IS FULL REGULATION SIZE.

A PEARL-HANDLED, GOLD-TRIMMED PEN....



This pen has a pearl handle, gold nose and solid gold pen. Length 6½ inches. Sells in stores for $1.50.

INITIAL LETTER *Each piece of this silverware engraved free of charge with an initial letter in Old English. Only one letter (your choice) on a piece.*

GUARANTEE *We absolutely guarantee every piece of this ware to be exactly as it is described and to give full and entire satisfaction or money refunded.*

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For 20, 30 or 40 subscribers choose any combination of premiums equaling the number of subscribers you have. IT IS AS EASY AS PLAY to get up clubs under this unparalleled offer. Start in *at once* and win one or more of the premiums while the offer holds good.

Address FARM AND FIRESIDE, Springfield, Ohio

SELECTIONS

OUR FOREIGN COMMERCE FOR 1899

OUR foreign commerce in the fiscal year 1899 will be even more remarkable than that of the wonderful year, 1898. Our exports in 1898 averaged more than $100,000,000 a month, and were nearly $200,000,000 greater than those of any preceding year in our history. And this happened when the whole world aside from the United States was short in breadstuffs and was looking to the United States with an unusually good crop for its supply. In 1899, with the world generally well supplied with its own breadstuffs, the United States continues to export at the rate of more than $100,000,000 a month, and up to this time has exceeded by $10,000,000 the wonderful figures of the corresponding months of last year.

This remarkable achievement of keeping up the record of total exports in the face of the tremendous fall in the value of breadstuffs and cotton is due to the great success of American manufacturers in foreign fields. The detailed figures of the Treasury Bureau of Statistics, covering the ten months ending with April, 1899, show that the exports of manufactures in those ten months have been $275,978,300, against $234,737,002 in the corresponding months of last year, an increase of seventeen per cent, while the exports of products of agriculture were $677,573,345, against $719,012,859, a decrease of nearly six per cent. Thus agriculture has lost $41,000,000 in the year's export, while manufactures have gained $41,000,000.

WHAT PRESIDENTS COST

Presidents "come high, but we have got to have them." It costs us $114,865 a year for a chief executive.

His salary is $50,000 and "found," as our Western neighbors say. The president's finding is rather comprehensive, covering about every possible requirement of a family. His private secretary, the clerks, doorkeepers, messengers and steward and three other servants cost us $33,865 a year. Then there is a contingent fund of $8,000 a year, which the president may use according to his discretion.

In furniture and repairs to the White House the sum of $16,000 more, to be used by the direction of the president, is provided for by the nation, and is always expended. For fuel alone $3,000 is allowed, and for necessary repairs to the greenhouse there is $4,000.

Altogether the presidential "finding" annually amounts to the snug sum of $64,865, nearly $15,000 a year more than his salary. The two aggregate $114,865. This is an imposing aggregate, but it is small compared with other presidents. The president of the French republic receives as salary $120,000 a year, $32,480 for contingent purposes, and a handsome house, rent free. So we get our president rather cheaply.—Boston Journal.

NATIONALITY IN NEW YORK

There are about a dozen "quarters" in New York. The Jewish quarter is east of the Bowery, in and around Ludlow and Hester streets; the Italians have two quarters, one in Mulberry street, the other in First avenue at about 110th street; the Germans have a large quarter near Tompkins Square; the French still live around the streets just south of Washington Square. The Chinese live in lower Mott street, Pell and Doyers streets; the Bohemians and Czechs live near First avenue and Seventh streets. Many Scots live around Jackson Square. The negro quarters are west of Sixth avenue, between Twenty-seventh and Thirty-third streets, and around 109th street, on the east side; the Greeks live in Roosevelt street, the Syrians in lower Washington street. There are no well-defined limits to the "quarters."

GROWTH OF THE ENGLISH LANGUAGE

If some recently published statistics are to be trusted, the English language is developing more than any other, past or present. While the German contains 80,000 words, the Italian 45,000, the French 30,000 and the Spanish only 20,000, Dr. Murray's English Dictionary is expected to contain no fewer than a quarter million words, more than half of which have come into use during the last half-century. A great part of these additions are technical or scientific terms.—Pall Mall Gazette.

EMERALDS IN RUSSIA

Emeralds, some of which are very fine, are found in the district of Ekaterinburg, along the banks of the Tokova river, about fifty-two miles from the capital of the district. Mining for this precious stone began in 1841, and at the beginning gave very good results. The first emerald was found by a peasant named Maxim Kojevnikow, in 1839, while he was examining the roots of a tree which had been uprooted by a storm. It is pretty certain, however, that discoveries of the same kind had already been made in 1669. It is even possible that finds had been made prior to then, as the Czar Boris Godounow presented the Fenetian engraver, Francis Ascentini, with a sable fur and one hundred ducats for having cut a large emerald for a ring. The finest emeralds were found when these stones were being mined for the account of the government. During this period—that is, up to 1862—5,600 pounds were extracted. The government afterward farmed out the mines to private parties, who were not successful. The emeralds of superior quality have been found near the surface of the soil, while those found in deep ground were of inferior quality.—Novoe Vremya.

ATMOSPHERIC HUMIDITY

The wet-bulb thermometer, for determining moisture in the air, is made and used as follows: Provide two thermometers and tie a bit of the thinnest muslin neatly around the bulb of one of these and keep it soaked with water. Lift this thermometer out of the water and whirl it briskly through the air for two minutes if the air is very dry, and for three or four minutes if the air is very moist. Read it quickly, and it gives the temperature of a thin layer of water evaporated under the influence of the wind produced by the whirling. The dew-point of the air in which the thermometer is whirled is about as far below the wet-bulb as this is below the temperature of the dry-bulb similarly whirled and read rapidly. The two thermometers may be hung side by side on a short piece of string for convenience; and this is then called the "sling psychrometer."—Monthly Weather Review.

STEVENSON AND THE BEGGAR

An American who visited the Stevensons at Samoa relates that the Samoans have a practice of begging. They boldly ask for whatever they may covet, wherever it may be found. The novelist became tired of this practice, and therefore said one day to a Samoan friend who had acquired from him a necktie, handkerchief and some other trinket, "Is there anything else you want?"

The Samoan made a hasty survey of the room.

"There is the piano," suggested Mr. Stevenson, ironically.

"Yes," replied the native, "I know, but," he added, apologetically, "I don't know how to play it."—Saturday Evening Post."

RECENT PUBLICATIONS

CATALOGUES RECEIVED

W. Atlee Burpee & Co., Philadelphia, Pa. Burpee's catalogue of Scotch collie dogs and fancy poultry.

Stoddard Mfg. Co., Dayton, Ohio. Descriptive circular of the Triumph spring pressure hoe and disk drills.

Sprague Commission Co., 218 South Water street, Chicago, Ill. "Hints to Poultry Breeders and Shippers."

Power Specialty Co., 126 Liberty street, New York. Descriptive pamphlet of Rife's Automatic Hydraulic Engine.

White House Paint Company, Baltimore, Md. Circular of White House Paint—a substitute for common lime-wash.

Wm. Cooper & Nephews, Galveston, Texas. Circular of the celebrated Cooper Sheep Dip—cure for ticks, lice and scab.

De Laval Separator Co., 74 Cortlandt street, New York. Illustrated catalogue of the De Laval "Baby" cream separator.

James Good, Philadelphia, Pa. Circular of caustic potash whale-oil soap, No. 3, for the destruction of insects on plants and trees.

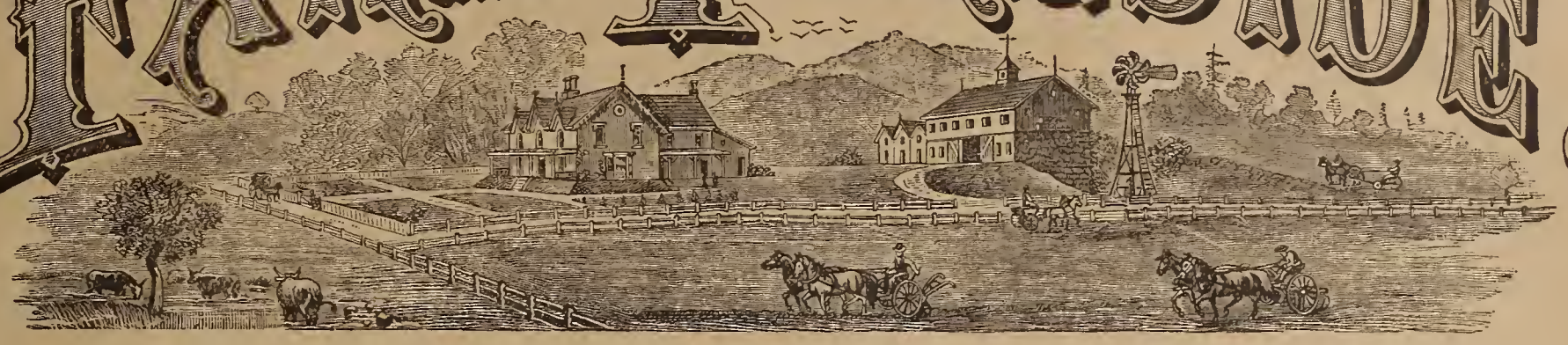
F. B. Fargo & Co., Lake Mills, Wis. Descriptive catalogue of the "Victor" combined churn and butter worker. Creamery and dairy sizes.

Fisk Telegraph School and Railway Business College, Lebanon, Pa. Pamphlet of information about the advantages afforded students at this institution.

Huber Manufacturing Co., Marion, Ohio. Descriptive catalogue of improved threshing-machines—engines, separators, wind-stackers, self-feeders, dust-collectors, automatic baggers, etc.

Farm Investment Co., Greeley, Colo. An undeveloped empire. Illustrated, descriptive pamphlet giving some facts and figures about Colorado and Wyoming for the consideration of homeseekers.

FARM AND FIRESIDE.



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THE ITALIAN PEASANT

BY EDWARD A. STEINER

WHEN the American tourist says, "I am going to see Italy," he means that he will go to Rome, to Milan, to Florence and Venice. He will see cold, damp churches, picture-galleries and decaying palaces, but he will not see Italy. He will see a matchless sky, so blue that the stars stand out in wondrous setting; he will see marvelous architecture, bewitching the senses; he will see a display of the most magnificent art products which the world contains; but if he wishes to see Italy, the real heart of the country, he must leave the highway, trodden by multitudes of hurrying tourists, forsake the English or American hotel, where there are more native Americans than one would meet in a Chicago hostelry; he must take a seat in a rickety, dusty omnibus, perchance be crowded in between a fat priest and a lean peasant, inhale the fragrance of garlic, endure the tortures of the multitudes of fleas which come like one of Pharaoh's plagues upon every wave of the plentiful road-dust, and drive deep into the heart of the country, where the whistle of the locomotive never strikes the ear, and where the ever-present, all-pervading and all-corrupting stream of tourists has not robbed the peasant of his picturesque garb and of his simple habits.

From the distance an Italian village is a thing of rare beauty; nestling upon a hill, wrapped in the glory of an early summer's sun, exhaling the rich perfume of its orange gardens, casting the deep shadows of its olive groves, hedges of fig-trees marking the boundaries of each little farm, the heavy church-steeple seeming to stand guard, and towering above the houses, which cling to the hills like swallows' nests, a noble castle.

Upon a nearer view, however, much of this beauty vanishes. The odor of orange-blossoms mingles with the rank flavor of rancid oil and the ever-present garlic. The houses so picturesque from a distance look dilapidated. Half-naked children play in the dust, and pigs appear at the front door, followed by the nimble goat, which lend neither grace nor fragrance to the scene. The church is well kept, but the castle is in ruins. The peasants that you meet are picturesque but indolent, and in many places are half starved, although the land seems to be flowing with milk and honey.

I have bought ten figs for a half-cent, a luscious melon for a penny, and yet children are so hungry that the merest crust of bread is fought for by pigs, goats and children, and generally the goats get it.

The reasons for such poverty in this country flowing with milk and honey are apparent. First of all, the agrarian conditions are simply ruinous. The soil in most places is owned by the lord or by the church, and a fourth of its product goes as rent to the owner. Again, the taxes seem unbearable—taxes on every olive-tree that grows; on goats and pigs and children; taxes when you are born, and taxes when you die; taxes if you remain single, taxes if you marry; taxes if you kill your live stock, taxes if you keep it alive; taxes on flour and sugar; in fact, nothing is untaxed except the air, and that is a great wonder and something for which to be thankful.

Another reason for the poverty of the country is in the lack of enterprise on the part of the farmer. Olive-trees and vineyards grow as the Lord made them, and in many places no new trees have been planted for decades except as merciful Providence has scattered the seed over the country.

Still a greater foe to Italian prosperity is the lottery. Twice a week there is a drawing, and you can begin to gamble with four or five cents, and end by begging on the streets. The lottery is conducted by the state, and has the sanction and co-operation of the church. It is a mania among the people to bet upon certain numbers which, if drawn, will make them rich, but the chances are all in favor of the government. For instance, if a person dreams about a fish, a snake or an old woman—in fact, about anything—he consults the dream-book, finds the corresponding number for these things, places his small change upon them, and lives in great hopes until the drawing-day, when, being disappointed, he goes home to dream and bet and hope again. Any important circumstance yields numbers for the lottery. If a person happens to fall down stairs, say twenty steps, number twenty is the lucky number. If a person is dead or alive, hurt on the knee or on the head, all these things yield numbers for the lottery, and keep the people poor. The drawing is usually held on Sunday, and the first thing that the peasants do when they leave the church is to go and see the numbers which have been drawn.

A VENETIAN FARM

Besides being poor, the Italian peasant is uneducated and grossly superstitious. Newspapers in many villages are unknown articles, and the few books found here and there are either stories of martyrs or robbers, both of whom the peasant delights to honor and know about. Every village has its own saint, whom it reveres almost like a god, and whom it honors every year with especial festivities. Religiously the Italian peasant is more pagan than Christian, living according to the light which he has, and that is not very great.

To see the peasant in all his glory you must see him in the market of some large city, say Venice. Hither he comes by boat, from his little farm surrounded by the waters of the lagoon, and it was there that I saw him. The sails of the peasants' boats are of many shapes and colors, patched and painted artistically; not like gray gulls as are our fishing-boats on the Atlantic, but like parrots or birds of Paradise, decked with wondrous colors and trappings. One has a rudely drawn sun, and the fiery red sail behind it would make it look uncanny were not the lips of the man in the sun drawn upward in a smile, giving him the appearance of a fat man on the Fourth of July in the glory of Bengal lights. Another fisherman has a cross, somber and severe, drawn on his sails; a pious man, no doubt. His neighbor has his satanic majesty roasting some unhappy mortals—a floating tract, which every one must see, and some might heed.

As soon as the peasants strike land they begin to make a noise, for the Italian market without noise would be like a circus parade without a calliope. Far, far away you hear it, like the chorus of an opera, like the musical dash of the sea, like a thousand instruments being tuned at one time. Occupying a space half as large as a town square is the market, crowded by a thousand or more people, looking like balls of cotton of many colors, tangled and snarled, and each one singing his own tune, and singing it all the time—the shrill soprano of the women extolling the virtues of their peaches and grapes; the alto of the peasants from the islands on the lagoon calling attention to the fruit of their henneries and holding it up for your admiration; the bass of the fish-seller, who was fortunate enough to catch a tunafish, Italy's great delicacy; and though people stumble over one another to buy it, he still calls without ceasing, "Tuna, the nices tuna of the sea; tuna, tuna, come and see it, come and buy it; tuna, tuna, tuna." By his side a small boy has a few barboni, a small trout-like fish, and the way he yells and calls attention to them makes you think that these must be the few fish upon which the miracle was performed in the desert place—only the miracle in this case works the other way, for they are drying up every minute and growing smaller. Sellers of amulets, luck-stones and scapularies hold them up to your gaze, press them to your heart, and prophesy all the luck which will come to you if you wear them, and the ill luck they will keep away. Spread out upon the ground are fantastic forms of macaroni and spaghetti, all kinds of animals made of flour and covered by dust to remind them of their mortality.

The market over, the peasant goes to his boat, his wife doing the rowing while he smokes a cigarette and hums ballads. We follow their gliding boat out into the lagoon, into the glory of the setting sun, and weep over Italy, so beautiful and yet so ugly, so Christian yet so pagan, so rich and yet so poor, so joyous and yet so sad, for Italy is a dying country. Signs of decay are seen in city and village, among priests and people. Italy is a corpse, a beautiful corpse, which yet may have its resurrection if these strong, sturdy peasant people could roll away the stone from their tomb, and with the dawn of day admit the flooding light of a truer and better civilization and a purer faith.

THE Venice that you see in the sunlight of a summer's day—the Venice that bewilders with her glory when you land at her water-gate; that delights with her color when you idle along the river; that intoxicates with her music as you lie in your gondola adrift on the bosom of some breathless lagoon. The Venice of mold-stained palace, quaint caffi and arching bridge; of fragrant incense, cool, dim-lighted church and noiseless priest, of strong-armed men and graceful women—the Venice of light and life, of sea and sky and melody. No pen alone can tell this story. The pencil and palette must lend their touch when one would picture the wide sweep of her piazzas, the abandon of her gardens, the charm of her canal and street life, the happy indolence of her people, the faded sumptuousness of her homes. If I have given to Venice a prominent place among the cities of the earth, it is because, in this selfish, materialistic, money-getting age, it is a joy to live, if only for a day, where a song is more prized than a soldi; where the poorest pauper laughingly shares his scanty crust; where to be kind to a child is a habit, to be neglectful of old age a shame; a city the relics of whose past are the lessons of our future; whose every canvas, stone and bronze bear witness to a grandeur, luxury and taste that took a thousand years of energy to perfect, and will take a thousand years to destroy.—From "Gondola Days."

VENICE, THE WIDOW

"And still that strange old city in the deep—
Paved by the ocean, painted by the moon,
Shows like the vision of the haunted sleep
Some heart was lulled to by some fairy tune!
But sorrow sitteth in its soulless eyes,
The same proud beauty with its spirit gone,
And spanned to-day by many a "Bridge of Sighs"
The sea goes moaning thro' their flutes of stone.
Gone the glad singing in its lighted halls,
The merry masque and serenade a part
Like o'er their own broad shadows brood its walls
Like memories brooding in a broken heart.
And Venice hath a veil upon her brow
Where sat of old the crown; she is a widow now."

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WITH THE VANGUARD

IN HIS excellent volume, "The War with Spain," Senator Lodge prefaces an outline of our military operations in 1898 with a forcible criticism of our military system as follows:

"The American navy was ready, as ships of war must always be, and when the President signed the Cuban resolutions the fleet started for Cuba without a moment's delay. With the army the case was widely different. Congress had taken care of the army in a spasmodic and insufficient manner, consistently doing nothing for it except to multiply civilian clerks and officials of all kinds, who justified their existence by a diligent weaving of red tape and by magnifying details of work, until all the realities of the service were thoroughly obscured. Thus we had a cumbrous, top-heavy system of administration, rusted and slow-moving, accustomed to care for an army of 25,000 men. Then war was declared. An army of 200,000 volunteers and 60,000 regulars was suddenly demanded, and the poor old system of military administration, with its coils of red tape and its vast clerical force devoted to details, began to groan and creak, to break down here and to stop there, and to produce a vast crop of delays, blunders, and what was far worse, of needless suffering, disease and death to the brave men in the field.

"Thereupon came great outcry from newspapers, rising even to hysterical shrieking in some cases, great and natural wrath among the American people, and much anger and fault-finding from senators and representatives. Then came, too, the very human and general desire to find one or more scapegoats and administer to them condign punishment, which would have been eminently soothing and satisfactory to many persons—just in some cases, perhaps, unjust in most, but in any event of little practical value. There was, undoubtedly, a certain not very large percentage of shortcomings due to individual incapacity which should have been sharply rooted up without regard to personal sensibilities. But the fundamental fact was that the chief and predominate cause of all the failures, blunders and needless suffering was a thoroughly bad system of military administration.

"An inferior man can do well with a good system better than a superior man with a bad system, for a good administrative organization will go on for generations sometimes, carrying poor administrators with it. But a really bad system is well nigh hopeless, and the men of genius, the Pitts, the Carnots and the Stantons, who, bringing order out of chaos and strength out of weakness, organize victory, are very rare, and are produced only by the long-continued stress of a great struggle and after bitter experience has taught its harshest lessons. At the outset of our war we had a bad system, and men laid the blame here and there for faults of system and organization which were really due to the narrowness and indifference of Congress, of the newspaper press, and of the people, running back over many years. To-day the system stands guilty of the blunders, delays and needless sufferings and deaths of the war, and war being over, reforms are resisted by patriots who have so little faith in the republic that they think a properly organized army of 100,000 men puts it in danger, and by bureau chiefs and their friends in Congress who want no change, for reasons obvious if not public-spirited."

THE Cornell experiment station, Ithaca, New York, has recently published a bulletin concerning patents on gravity or dilution separators that ought to be widely read in every community subject to the raids of the "dilution separator sharks." This bulletin, No. 171, says:

"In bulletin No. 151, published in August, 1898, the efficiency of these creaming devices was summed up as follows:

" 'Gravity or dilution separators are merely tin cans in which the separation of cream by gravity process is claimed to be aided by dilution with water.

" 'Under ordiuary conditions the dilution is of no benefit. It may be of some use when the milk is all from "stripper" cows, or when the temperature of melting ice cannot be secured.

" 'These cans are not "separators" in the universally accepted sense of that term, and cannot rank in efficiency with them.

" 'They are even less efficient than the best forms of deep-setting systems.

" 'They are no more efficient than the old-fashioned shallow pan, but perhaps require rather less labor.'

"These conclusions have since been abundantly confirmed, though there seem to be many who desire to use these cans on the score of the less labor required, even though there may be in most cases some loss of fat.

"One of the chief misleading features used by the promoters of this system is the way in which the term separator is used to imply that the dilution process is equal in efficiency to a centrifugal separator. This is well shown by the following quotation from a recent circular of the —— cream separator.

" 'Those who keep only one or two cows, as well as the large dairyman, can have the advantage of a separator at a small cost, compared with the centrifugal separator or creamer.'

"In another way would-be users of the dilution process are being misled, and this is in regard to the patents that have been issued or applied for on the dilution process or on the various styles of cans in which it is to be used. At the present time certain parties are going about the state claiming a royalty from any who may be using the dilution process in any form of can but their own."

The bulletin then describes and illustrates eight of these so-called separators, quoting from the patent office "Gazette," and examines the claims and specifications. Commenting on them it says:

"A striking similarity is observable in all these patents. In none of them except —— is dilution mentioned in the claim, and there it covers not the dilution itself, but the manner of it. In all of them, however, dilution is mentioned in the description as an essential part of the process. It would seem, therefore, that in patenting some minute or unessential feature of the can these people have sought to convey to the uninformed the idea that the whole can, process and all, was subject to the patent. This is further borne out by the attempt in some cases to collect royalty from people using the dilution process in other cans."

The summary of the bulletin is: "Several patents have been granted covering unimportant details of the construction of cans in which the dilution of milk with water is recommended to facilitate the separation of the cream.

"Any one desiring to use this process of doubtful utility is perfectly free to do so without let or hindrance from the holder of any patent right whatever.

"The Cornell University agricultural experiment station will esteem it a favor to be put in communication with any one who is demanding a royalty from persons who are diluting their milk in order to facilitate the raising of the cream."

THE July crop report of the Department of Agriculture gives the condition of the apple crop as follows: "There has been a general decline in the condition of apples during the month of June, and there are few important apple states in which the condition is not considerably below the average for the past fifteen years. In New York, Michigan and Missouri it is 18 points below, in Kansas 13, Kentucky 9, Tennessee 7, North Carolina 21, Virginia 10, Iowa 3, Illinois 2, and in Maine 48 points below. On the other hand, it is 11 points above the fifteen-year average in Ohio, 5 points above in Pennsylvania, and 5 points above in Indiana."

The shortage in most of the important apple states will send many apple dealers and packers into the regions of good yields with the object of buying the fruit on the trees at low prices, especially from those not informed on the general condition of the crop. The growers rather than the dealers are entitled to the probable advance in prices, and a timely knowledge of the situation will enable them to secure it.

MAJOR-GENERAL WOOD, whose administration as military-governor of Santiago is an unqualified success, says in an article in the "Century" for August:

"I can speak only from my own experience in regard to the condition of affairs in Cuba, but basing my conclusions upon that experience I can state positively that if we give the Cubans an honest, economical, non-political government under military control, and use every means to put the most desirable and competent Cubans in office, liberalize and Americanize their institutions, improve the sanitary and other conditions of their towns, organize and put in effect a suitable school system, get rid of the present intolerable administration of criminal law, and put in operation an equitable system of taxation, we shall find there is no Cuban question left, and that we are dealing not with a distrustful, suspicious and resentful people, but with a people who will appreciate what we are doing for them and will give us their cordial support.

"This has been my experience in the province of Santiago, and I think that I can say without exaggeration that the conditions in that province were as difficult, if not more difficult, than those existing in any other portion of Cuba, for we had nearly half the Cuban army, and found the province in a condition of complete disorganization so far as its civil government was concerned. I have not yet proposed any measure intended to benefit or improve the condition of the people which has not met their warmest approval. They have worked enthusiastically in all school reforms, they have supported every effort to improve the sanitary conditions, and they have used all their influence in supporting the measures introduced to guarantee public and impartial trial of all persons charged with criminal offenses. There have been virtually no disorders of any consequence, and in the province of Santiago (and this province includes 29.4 per cent of all Cuba, including the islands, and has over one fifth of the total population of the island) I have found the people to be with me on all projects in which I could have expected the support of an honest and self-respecting people.

"The people of the island desire that it shall be as nearly like our own as possible, and I know that we can establish a government which will render life and property safe to all the inhabitants of the island of Cuba, whoever they may be or wherever they may come from. This we must do, or we shall stand in an unenviable position before the world at large. In doing it we can count upon the support and approval of the inhabitants of the island. There are, of course, agitators and dissenters, seekers after notoriety and position by lawful means and otherwise; there are robbers and murderers and all classes of people, but the majority of the people of Cuba want a good government, liberal in form, and they look to us for it. This government must be under military control until it is completely established."

IN A recent bulletin the North Carolina experiment station does good service to the public by exposing an attempt to put upon the market a mineral adulterant for wheat-flour. A concern in South Carolina offers to sell to millers finely ground talc, or soapstone, under the name of mineraline, to be used for mixing with wheat-flour to the extent of twelve to eighteen per cent. There is no justification for the use of any adulterant in flour; the use of a mineral injurious to the health of the consumer is a detestable crime.

THERE seems to be a regular epidemic of "embalmed" milk this season. Boards of health have investigated the fresh-milk supply of a number of cities, and have found large quantities of it dosed with formaldehyde to prevent souring. In the course of investigation in one large city it was found that milk had been dosed successively by dairymen, wholesale dealers and retailers, so thoroughly poisoned, in fact, that by the time it reached the consumer it was dangerous to life. In another large city a number of cases of sickness and death were attributed to the use of milk treated with formaldehyde. Possibly those who put it in the milk were ignorant of its deadly character, for this powerful antiseptic is sold to dairymen and milk-dealers only under various harmless names. But ignorance does not relieve them of responsibility. In many states it is a crime to put any preservative, drug or compound into milk. So numerous have been the warnings in the dairy and farm papers and in the daily press against the use of preservatives in food products that one is forced to the conclusion that their continued and enlarging use is due to unscrupulous greed rather than to lack of knowledge regarding their injurious character.

SUCCESS to the Man Who Reads and Thinks" is the heading of the following press bulletin from the Kansas experiment station:

"Among the questions asked of creamery patrons by the Kansas experiment station is 'What dairy or farm paper do you read?' Out of seventy-seven patrons who answered this question we found that fifty-three, or sixty-nine per cent, took no farm or dairy paper. In looking up the details of the records it is interesting to note that the highest yield was made by a man who keeps special dairy-cows and subscribes for a dairy paper. This patron realized $9 a cow per annum more than the next best patron who reads no paper, and $36 a cow more than the poorest patron.

"In collecting records from various parts of the state we find where intelligence is applied to the dairy industry the cow is yielding from $60 to $80 worth of dairy products per annum. Contrast this with $20 to $30 without intelligence and no one need ask if education pays. At the Kansas experiment station we find that intelligence applied to feeding calves will cause them to gain from twelve to twenty-three pounds a week instead of seven or ten pounds. This is an age when intelligence can be turned into cash, when, as Secretary Coburn says, 'Muscle to win must be lubricated with brains.' "

THE report recently received by the Secretary of Agriculture from Dr. Charles U. Shepard, in charge of the experiment tea-garden in South Carolina, records very successful progress in the enterprise. Dr. Shepard says that about fifty acres of land are now under tea cultivation, and that a product of 3,000 pounds was sold last year at a profit of twenty-five per cent. He estimates an annual yield of 10,000 pounds when all the plants now growing reach maturity. The tea-plants stood the exceptionally severe weather of last winter without loss.

He solved the labor problem by establishing a school for the education of the negro children employed in picking tea-leaves. The quality of the teas produced, both green and black, was very satisfactory.

Sawdust Bedding

Scarcity of straw has for a year or so forced me to use saw shavings to bed animals. I confess that for a long time I have been prejudiced against sawdust and shaving manure. At present I am very glad that I had to make the trial, for I can say that I am taking more comfort in the stables than when I used nothing but straw. Horses and cattle, and hogs, too, while bedded on shavings are always clean in the morning, and that is more than I could say of them when they were bedded on straw. In short, I have learned to like this material for the purpose, and shall continue to use the shavings as long as I can have them at a reasonable price. In the winter I can get them loose most of the time for the hauling. Now I am paying fifteen cents a bale for them. Shavings are clean and tend to cleanliness. That much is settled in my mind for good. It means a good deal, too, so far as the cows and milk and butter are concerned. We want these things as clean as we possibly can. The only question about which there could be a possible dispute is whether sawdust or shaving manure is as good for the land as manure from animals bedded with straw. I have usually favored the straw manure, although I was not afraid (as are others) to use sawdust manure quite frequently. A symposium on this question, which I find in one of the last issues of "American Gardening," should set the matter entirely at rest. The conclusions drawn by different experiment-station workers are in entire accord with my own observations. L. A. Clinton (Cornell University) reports that on a piece of ground where shaving manure had been applied year after year the yields were fully as good as on an adjoining plat on which straw manure was applied. Of especial interest is the reply of the director of the New Jersey station, Prof. E. B. Voorhees, who says:

* * *

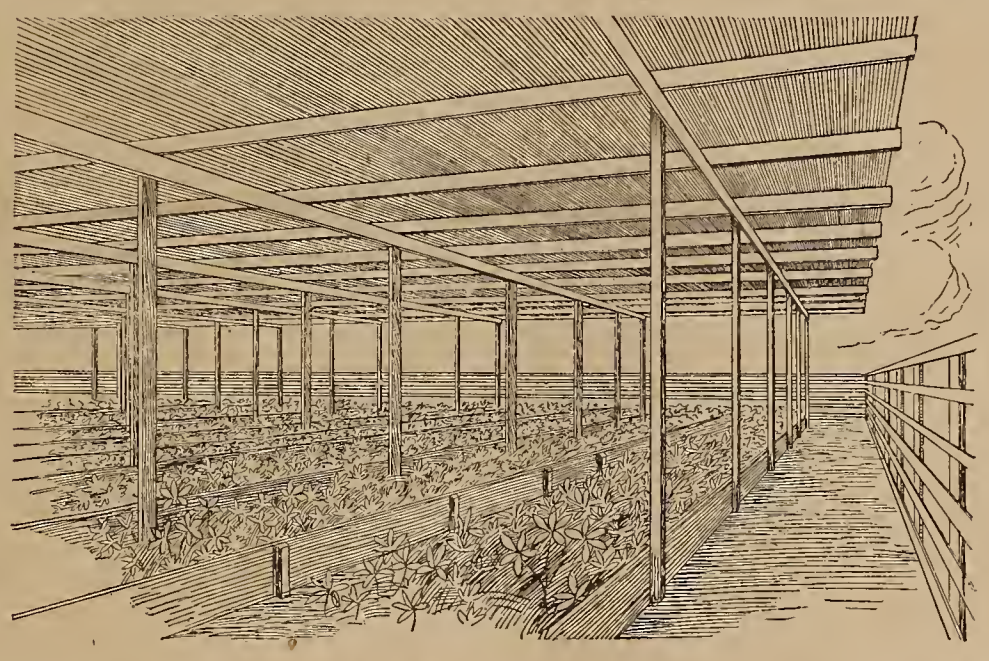
"It is my judgment that sawdust may be used with perfect safety, provided the manure is not allowed to lie in loose heaps, and thus heat rapidly and fire-fang, as is the tendency with manure that is made where sawdust or shavings are used as bedding. If the liquid manure is mixed with the solid, and even water added, in order to get the heap moist, there is no more danger of loss than if straw were used. Furthermore, because sawdust or shavings will absorb proportionately more of the liquid than straw, a much smaller quantity of bedding should be used than in the case with straw, and in the case of white pine there can be no objection whatever from the standpoint of its injury to the soil, as it very readily decays and no deleterious substance is formed in its decomposition. I should hesitate to recommend the large use of sawdust derived from woods in which there is too much pitch, though I cannot see even here that if it were used in reasonable amounts any damage would follow. Finally I may say that since the 'proof of the pudding is in the eating,' I have proof from three-years' experience at the experiment farm with the use of pine shavings as litter; it is not deleterious, but on the contrary advantageous, because enabling the better absorption of the liquids and better distribution of the manure, and thus far no injurious effects have been observed. It seems to me that the whole question hinges upon whether hot fermentation is allowed to take place in the manure, which results in fire-fang and in the reduction of the value of the product. This may be obviated, as stated above, either by moistening or using a smaller quantity." It is true that shaving manure (especially where the animals are heavily fed with grain, as we do when horses are being worked right along, or while cows are fed in the stable during winter, or while pastures are low in summer) gets easily into violent heat and is liable to fire-fang. Even then the manure would not injure the land.

* * *

A Ginseng Book

Having seen so much interest manifested all over the country in ginseng culture, I was very glad to find on my book-table the little volume entitled "Ginseng," just published by the Orange Judd Co., of New York City. It is written by Maurice G. Kains, and contains chapters on cultivation, harvesting, marketing and market value, also a short account of the history and botany of the plant. The text is liberally interspersed with illustrations. As the price of the book is only twenty-five cents, there is no need of any one interested in the subject going without the knowledge of all that is now known about ginseng-growing. So far as the profits of growing the commercial root are concerned, nothing especially new is given.

The one difficulty about raising plants from seed is that it takes eighteen months for the seed to sprout, and that it must be kept moist during all this time. The best way to store the seed is to stratify it. Make a mixture of leaf-mold, sand and loam, and pass it through a fine sieve, finer than the size of the seed with the pulp off. If not sifted great difficulty will be experienced in removing the seeds from the mixture when the time comes for planting. A mixture made in this way and sifted will be slower to dry out than most unmixed soils, and will therefore be better as a storage material. Put a layer half an inch deep smoothly upon the bottom of a box, and scatter the berries thickly, but only one deep, upon it. Put another half inch layer of earth, then a second layer of berries, and so continue until the box is full. A deep cigar-box will hold several ounces of seed, and is a handy size to use, although a stronger box will generally be better, particularly where it is to be much exposed to the weather. When packed, either store the box in a cellar or bury it in some place that will not become wet, but will always be moist enough to prevent the possibility of drying out in the summer. Since frost does not injure the seeds, but rather improves their germinating qualities, it will be better to put the box out



of doors than in the cellar. Care must also be taken to prevent the attacks of mice upon the seeds. A covering of perforated tin or wire netting will effect this and will not hinder the entrance of rain or other water. Thus stored the seeds can be left one year. They are then to be sifted out and planted in a good friable loam, rather light than heavy, well supplied with decaying vegetable matter free from obstructions, naturally well drained and preferably facing the north. The seeds are set singly in rows two or three inches apart and at intervals of one or two inches apart in the row.

* * *

A Shady Shed

The most congenial shade that could possibly be provided for ginseng-plants is that of the forest. It should not be too dense. The next best thing, probably, is a number of lath frames, made so as to provide about half shade, and tied to a framework of scantling raised upon posts high enough from the ground to permit of standing erect under it. During the winter the sections may be removed and stored. Along the sides of the bed exposed to the direct rays of the sun it will be found necessary to place vertical shade, to protect those parts of the bed from the summer sun.

I believe that a shady shed of this kind would come very handy to have in an ordinary garden. There are many garden crops which would just delight in this half shade during the hottest portion of the summer. Lettuce and celery, for instance, are often suffering from the excessive and dry heat of our average summers. With a shed as described these crops could be had in perfection during the entire season. For some years it has been my ambition to construct such a summer-house, and only the fact that I have so many irons in the fire has thus far prevented.

T. Greiner.

SALIENT FARM NOTES

Shady Nooks

After going about on this earth for so many years with my eyes and ears wide open it would seem that I ought to know more than I do. Often I find myself wondering why I did not know enough to do this or that last year or five or ten years ago. Why didn't I do this or that while I was on the up grade of life, so that I could be enjoying it now as I go down? For instance, here is a little thing I should have done. When my wife or I desire to go to town I hitch up the mare and tie her to the hitching-post to wait until we are ready. That hitching-post is out there in the yard under the broiling sun instead of under the shelter of a tree. When I was planting trees on this place six years ago I could have planted three or five ash or maple trees in the form of a V with the point toward the south, thus:

S
*
* x *
E * * W

Then set my hitching post or rack at x, and by this time it would be in the shade all day, and a horse or team could stand there at any time without discomfort. It is only one of those little things that go to make up the comforts of life, yet I didn't think of it when I should.

* * *

Often I hear people who are passing on the highway exclaim: "What a nice little home!" "Isn't that a pretty little place!" "There's a bird's nest for you!" etc., etc. Yet I would arrange it entirely different if I had it to do over again. It is a difficult matter to go into a corn-field and pick out the best spot for a house, barn, yards, etc., and plat a lawn, garden, orchard, etc., so that everything will be convenient and satisfactory. I would advise all who are preparing to build and arrange a home to be sure to plant one or two V's of trees, as mentioned above, in the back yard. Also to plant one or more groups of trees on the lawn or not far from the house. A group of four to seven trees set eight or ten feet apart at one side of the lawn will soon provide just the shade old people love in hot weather, and make a perfect playhouse for the children. The trees should all be of one variety to grow and look well, and should be trimmed up eight to ten feet.

* * *

A pretty little "cozy corner" for children to play in can be made by planting a half or three quarter circle of arbor-vitae, inclosing a space fifteen to twenty feet across. Such a "cozy corner" as this, and the group of trees on the lawn, with hammock and swing under them, will be remembered by the children to the last day of their lives—remembered vividly when almost all things else are forgotten. I wish I had thought of these little matters when I platted and planted this place.

* * *

Prepared for Mid-summer Droughts

Just now this locality is suffering from a prolonged drought. Pastures are bare, and the soil in them is hard as rock and dry as powder. Corn-leaves curl up during the hot days, rape-leaves hang limp and nearly lifeless, while even the cow-peas look weak and drooping. About sunrise the broad, succulent rape-leaves stand up and appear to be full of life and vigor, while the sweet-corn leaves are cool, full of juice and even tipped with dew. While these plants are in this condition is the time to cut a supply for the day and draw into a shady place or pile on the barn floor. When I see how bare the pasture is it does me good to look over the fence alongside and observe the abundance of sweet corn standing there—enough to supply the cows with green food till frost comes.

We may as well make up our minds that one of these midsummer droughts will prevail at least four years in five, and that we must prepare for them. This season I have been feeding rape to the cows. I had about one sixth of an acre and it supplied a large quantity of feed. The seed was sown the twenty-first day of April, and when the plants were a foot high, the latter part of May, I began cutting, and finished the patch July 20th, the last plants being about two feet in height. The early cut plants made a fair second growth, but the drought has cut short anything like a second crop. In a damp season rape will make a good second crop after cutting, but in this locality we can calculate on only one good crop. As a soiling-crop it is much earlier than sweet corn, and if the soil is very rich the yield in bulk is large. It is a good thing to try on a limited scale. I am quite satisfied that many farmers and dairymen who try it will adopt it as one of their staple soiling-crops, while many others will reject it. Those who try it should keep in mind that the soil must be rich to grow good rape, and if it is of a loose, mellow nature so much the better.

* * *

Horseless Power

W. H. H., Iowa, writes me that he hopes the time is not far distant when we shall be able to dispense with the horse as a source of power on the farm. "I shall hail the glad day," he continues, "when we shall be relieved of this great burden; when we can devote all of our acres to the production of food for human beings and for such animals as contribute directly to our food supply; when we shall be rid of the laborious task of growing, curing and storing the enormous quantities of fuel (food) required by the animals that furnish us power only."

W. H. H. is not the only one who will hail with joy the day when the farmer shall have at his command a cheap mechanical power to move his implements on the farm and his conveyances on the road. That such a power will soon be discovered (possibly is already) and harnessed is evident to all close observers of the trend of invention. Horse-power is the cheapest and most easily managed we have at present, but it is far too expensive to remain much longer. We shall have a cheap and powerful motor driven by stored electricity, liquid air or some other agent and as easily managed as a wheelbarrow ere many years roll by.

* * *

Fake Fairs

A lady Farm and Fireside reader in Missouri writes, among other things: "Do you think that we farmers should attend and support the fakir, hoss-trotting, midways called agricultural and fine stock exhibitions, and compete for the small prizes offered for improved stock and farm and household products, while nine tenths of all the receipts are given to fast horses, charioteers and balloonists?"

I have attended a great many fairs, state and county, in years past, and some of them were very good. The last county "agricultural and fine stock exposition" I attended was probably something like those referred to by the Missouri lady. A short time after entering the grounds I became convinced that all that was lacking to make it a good thing was all the essential elements that go to make up an agricultural fair. While I stood gazing at the great aggregation of slab-sided, spindle-shanked, rattailed horses, the array of fakir stands, side-shows and gambling devices, and wondering what had become of the pretty Jerseys, the solid Herefords and Shorthorns, the smooth and squarely built Poland-Chinas, Berkshires and Chester Whites, and broad-backed Southdowns, Cotswolds and Oxfords, an old farmer friend tapped me on the shoulder, and with a comical wink, drawled, "In my opinion, this fair is a nice fair for those who like this sort of a fair. Let's go away!" And away we went. Evidently a great many others did the same, and stayed away, for the "association" expired unmourned the following year. If your county fair is in good hands attend it by all means. And all who can possibly do so should attend the state fair. One can learn much at a good fair if he goes for that purpose.

Fred Grundy.

OUR FARM

FARM THEORY AND PRACTICE

SELLING HAY.—Much is written in favor of converting the coarse and bulky crops of the farm into higher-priced products for the market by feeding, thus retaining upon the farm as much of the fertility as possible. Such advice is sound and safe for all who are so situated that feeding can be done at reasonable profit, but it is unreasonable to assume that all can sell their crops in concentrated form through conversion into meat, milk, butter, wool, etc. In the very nature of the case immense amounts of stuff must go direct from the fields to the markets because they are needed in their original form by consumers or manufacturers. This is true of hay as well as of other products of the field, notwithstanding all the writers that hold up their hands in horror at the thought of selling this feed. On many farms hay is the best cash crop, and it is good practice to sell it. It is wholly a question of profit, taking a term of years into consideration when profit is calculated so that the questions of labor and soil fertilization may be accurately determined.

* * *

VALUATION OF PLANT-FOOD.—There is an inclination on the part of many writers to emphasize the importance of the tables giving the fertilizing value of the various farm crops as stated in dollars and cents, and to insist strenuously that a farmer is playing a losing game when he sells a ton of hay for less than the amount named in these tables as the valuation of the plant-food contained in the hay. But if their position is correct, the hay must sell for a sum equal not only to the valuation in the tables, but equal to this plus the cost of production. They are inconsistent in omitting the latter item. If the valuation placed upon the manurial elements of a ton of any field crop should be accepted as correct, then every farmer is losing money that does not sell his crops for more than manurial value and cost of production combined. Does the practical farmer believe that he must set aside say six or seven dollars for the fertility in the ton of timothy hay sold off the farm? I think not. I certainly have no desire to underrate the matter of soil exhaustion, and I know that fertility is more easily and safely maintained by the feeding of crops on the farm than by their sale, but it is not in the interest of a better agriculture to make radical assertions wholly at variance with the experience of careful men.

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WHERE IS THE ERROR?—Clearly the mistake is in assuming that the plant-food in a ton of field crops should be given the same valuation a pound as is given that in available commercial fertilizers. If it be true that the farmer at a distance from high-priced city markets cannot afford to furnish all the fertility needed by a crop in the form of available fertilizers, then is it equally true that he cannot rightly value that obtained from the soil and air at the price demanded for it by dealers in fertilizers. The farmer finds that he can afford, it may be, to supply a small amount of the needed plant-food in the form of a fertilizer, because in such form it helps the plants to help themselves in the soil. It is the availability of the plant-food that gives it its value. The elements in a fertilizer can be evenly distributed just when and where needed. The soil is a storehouse of plant-food that has a much lower market value a pound.

It is not possible to place an accurate valuation upon the nitrogen, phosphoric acid and potash in the soil. We know that it has value, and that we cannot afford to have it removed by crops without compensation, but it seems to me absurd to assert that any farmer reduces the value of his land by six or seven dollars when he sells a ton of hay from it. A certain amount of the three valuable elements has left the soil, but its value to the farmer in nine cases out of ten is not nearly so great as the selling price of an equal amount of these elements in a fertilizer. The figures given in these tables are excessively high for most farms.

* * *

TIMOTHY HARD ON LAND.—The hay-farmer must bear in mind, however, that timothy is a hard crop on land. While two tons of it does not remove fertility from an acre that has a value to the farmer of twelve or fourteen dollars, yet it has some value; and then the crop is such that the soil fails to get such exposure to the air as all soils need. It lies compact while the roots feed near the surface. Year after year, until the meadow becomes foul or unproductive, this condition continues. If timothy were grown a single year in rotation, as is usual with wheat, it would not be considered exhaustive, the sod furnishing humus for a succeeding crop. Where clover is grown with the timothy soils usually improve, although the clover cannot add a pound of the phosphoric acid and potash that are valued so highly in the estimates to which reference has been made. Crops are not "hard" upon land in proportion to the amounts of fertility removed in them, but according to their habit of growth, the character of the methods required in their production, and the nature of the rotation or the absence of rotation.

* * *

RATIONAL MANAGEMENT.—It is the business of the man who has land adapted to timothy, and who raises it for hay, to learn whether the best profit lies in feeding it or selling it. If the market price seems to justify selling it, the question of maintaining fertility must be considered just as it is in the case of wheat or other product. We know that such land must be exposed to the air and given humus, or else have plant-food added directly in the form of stable manure and commercial fertilizers. A combination of both methods is best. The meadow should be under a reasonably short rotation. The sod should be turned and allowed to decay in the soil where it furnishes humus. When the land is re-seeded clover should be seeded also, as it will furnish nitrogen and also feed deep in the soil, making tough material available and bringing it up near the surface, where the timothy will feed upon it as the clover-roots decay. Two years is a sufficiently long time for a meadow to stand if the interests of the soil are considered. Timothy is hard upon land simply because we make it so, by letting it feed upon the surface for years while the soil beneath is left to become compact and lifeless. DAVID.

LIGHTNING

The National Weather Bureau reports that 365 deaths have resulted during the past year from lightning-strokes, besides the destruction of a large amount of stock in the field, improved property, etc. In 1898 reports were received showing the destruction of damage by lightning of 1,865 buildings, aggregating a loss of $1,440,000, and that 700 damaging strokes fell upon live stock, single strokes in some cases killing a large number of animals. A large proportion of this stock met its death in close proximity to wire fences, and these fences, it was found upon investigation, were not provided with grounding-wires. Some of the reports show that the bolts struck the fences at a considerable distance from where the animals were killed. It is undoubtedly a fact that barbed-wire fences are responsible for considerable loss each year from lightning, and it is stated by the officials of the weather bureau that a considerable percentage of this loss could be obviated by the use of grounding-wires at frequent intervals in the construction of such fences, thus providing the current a suitable path through which to pass to the earth.

A recent bulletin issued by the weather bureau discusses the question of lightning-rods and their value to the farm and the house. This subject is interesting in view of the fact that lightning-rods in many sections have of late fallen into disrepute and been discarded as worthless, and in some cases considered even as "lightning-attractors," to the detriment of buildings. The bureau states that while no lightning-rods are absolutely sure safeguards, yet almost any conductor is better than none, and that "conductors are essential to anything like security." The fact that a building provided with lightning-rods of the most approved styles may be struck by lightning and damaged or destroyed does not prove the uselessness of rods. Any part of a building, if the flash be of a certain character, may be struck, no matter whether there is a rod on the building or not. Fortunately, however, such cases are exceptional. The great majority of flashes in our latitudes are not so intense but that a good rod, if well grounded, will furnish the most natural path for the flash. But in some cases of sudden enormous discharges of electricity the rod may be likened to a river channel in time of a Western flood—unable to carry off safely the full current.

All barns and exposed houses, especially if situated on hillsides, should have lightning-rods, the weather bureau states. Ordinary dwelling-houses in city blocks have not need for them that scattered country houses have. The iron rod is the cheapest and as efficient as copper; it should weigh about six ounces to the foot and be in the form of a tape. In this shape it is much more efficient than if round. The ground connection of a rod is stated to be of very great importance; at best it is a poor ground for some flashes, and it is recommended to bury the earth-plates in damp ground or running water, especially the latter. The apex of the rod should be plated or in some way protected from corrosion. The bulletin finally comments on the medical features of the subject, and states that a stroke of lightning received by a person frequently causes a temporary paralysis of the respiratory organs and the heart which, if left alone, will deepen into death, but if quickly and intelligently treated—chafing, artificial respiration, etc.—will generally result in recovery.

GUY E. MITCHELL.

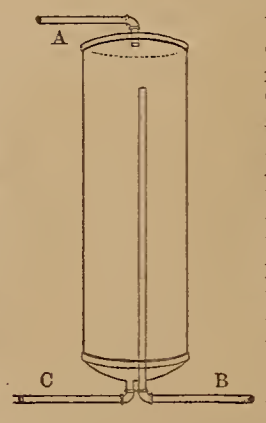
THE HOUSE WATER-SUPPLY

In planning to put a water-tank in your kitchen have you considered that during the summer when the stock are in the fields drinking from springs the tank will have less water flowing into it from the windmill or the hydraulic ram, and that, in consequence, if it is not empty it will contain warm water? And have you considered that when you want cold water under these circumstances you must turn on the windmill, start the ram, or pump the water yourself? If you don't your wife will! If you haven't thought of this, then profit by my experience. "Experience is the name a man gives to his mistakes."

The tank in the kitchen had survived its usefulness, was worn out, and a new one had been decided upon. The mistake was made when the old one was put in; it should never have been pnt in the kitchen.

I bought a large galvanized steel tank with a capacity of about one hundred and fifty gallons, and set it up outside the kitchen in the woodshed, the bottom being eighteen inches above the faucet at the sink. A box was built around it large enough to allow a packing of six inches of sawdust above, below and at the sides. This material was applied after the pipe connections had all been well tested to see that they did not leak. It was put around the tank to keep the water cool during the summer by preventing access of the warm air to its sides, and to prevent freezing in the winter.

The tank is one of the kind used for heating water in connection with a range, and as it stood when I purchased it, it had four openings—two at the top, one at the side and one at the bottom. One of the holes at the top opens into the tank direct, and was to be used for the outflow of warm water. The other is attached to a pipe on the inside of the tank which was to carry the cold water nearly to the bottom. The hole in the side was for the inflow of water as it came heated from the fire. At the bottom was to be attached the pipe that led to the fire-box where the water was to be heated.



But I didn't want the water hot, and therefore had no need of this arrangement of the pipes. My ends, I thought, would be best gained by turning the tank upside down and plugging the side opening. This I did. The pipe that comes from the hydraulic ram I then attached to the supply-pipe, A, so that the fresh water enters the opening that was originally at the bottom, but is now at the top of the tank. The outflow-pipe, B, was then screwed to the cold-water pipe which runs inside the tank, and the pipe C, which runs to the sink, was fastened to the original hot-water pipe.

Whenever the hydraulic ram is working the water flows in and there is a constant supply of fresh, cool water all summer. By turning a tap in the flow-pipe I can shut off the water from the tank and force the water to the large cistern in the garret when the supply in it from the roof becomes exhausted.

The outflow-pipe empties into the sewer, and like the tank and the other pipes, is well inclosed in sawdust. M. G. KAINS.

WHEAT NOTES FOR ENTERPRISING WHEAT GROWERS

The winter wheats of the United States can well be put into three distinct classes. The white, soft wheats are most successfully grown in Oregon and Washington, and in the leading apple-growing regions of the middle latitudes. The semi-hard wheats are to be found between Oklahoma and Nebraska in the West and Canada and North Carolina in the East. The very hard flinty-grained winter wheats, known as durums, are being successfully grown in Texas.

There is an immediate and pressing demand in Oklahoma and northwestern Texas, as well as in southern Illinois, Indiana and southwestern Kentucky, for a semi-hard red wheat that is of a hardy, drought-resistant character that will resist the orange-leaf rust (Uredo rubigo-vera). Wheat of this class is perfectly adapted to the roller-mill process of flour-making, which has now been so generally adopted by millers.

The Turkey Red, a semi-hard wheat now so extensively grown in Kansas, is an exceedingly valuable variety. The address of the leading growers in the states named can be had by addressing the directors of the Kansas and Iowa experiment stations. The Budapest, now extensively grown in the vicinity of Grand Rapids, Michigan, can be very properly put in the same class.

The varieties of the durums, or macaroni, wheats are less known. One variety now grown in the vicinity of Dallas, Texas, is the Nicaragua hard. This is classed as one of the very few rust-proof wheats that have been successfully grown in the South, where the rust almost invariably ruins the crop. It is a heavily bearded wheat, and can be sown in central Texas not only in October, but in the following February, thus giving the grower a double advantage in securing a crop. So far as known, the old-fashioned red-bearded Mediterranean is still one among the most reliable varieties for general cultivation in the Southern states, but intermixture with other varieties now renders it almost impossible to obtain a supply for seeding purposes. It was by far the most valuable of the great number of varieties yet imported, and a variety least subject to the attacks of the wheat-weevil.

Among the varieties that may very properly be classed with the medium-hard red wheats which can be profitably grown in all the dent-corn growing regions, the Fultz, which was originated in Pennsylvania, takes the lead. Until the time the seed of this variety had become too much deteriorated by intermixture with other varieties it was regarded by the wheat-growers of the United States much in the same light as was the Wilson's Albany by the strawberry-grower, the Concord by the grape-grower, and the Baldwin or Newton Pippin by the apple orchardist.

Another variety of wheat, the Mealy, which the writer of these notes discovered in southern Virginia, when chief of the seed division of the United States Department of Agriculture, is another wheat of a similar character, but which, like the Fultz, is rapidly losing many of its desirable qualities by being mixed with other more common varieties. When the originator of it took it to the country mill the miller refused to grind it on account of the extreme hardness of the grain. This variety has been well tested at the Ohio experiment station, and is highly recommended.

Where the winter wheat was killed by the extreme cold weather last February, in the winter-wheat growing countries in northern Ohio, Indiana and southern Michigan, the Turkey Red wheat should be substituted for the less hardy varieties. Reliable seedsmen ought to procure and advertise this variety. In the meantime the directors of the experiment stations in the winter-wheat belt, as well as the one at Ottawa, Canada, can be consulted about other hardy varieties.

More and better work in the line of introducing improved pedigreed seed of the leading farm crops is a need of the hour, since it will surely lead to a greatly increased yield and thereby promote the general prosperity of the farming community. That enterprising wheat-growers want better seed-wheat is shown by the fact that they frequently pay from three to five dollars a bushel to responsible parties for some presumably new variety which in too many cases proves to be no better than the ones heretofore grown. It has been well stated that "it is the recognized province of the experiment station in each state to determine what varieties of the different grain crops are best adapted to particular localities in the state; for if they are not informed on the subject others are not likely to be." W. M. K.

NOTES FROM GARDEN AND FIELD

Late Cabbages and Cauliflowers.—The hot and very dry weather in June and early July has prevented me and many others from planting seed of late cabbages and cauliflowers at the time when we have usually done or should have done it, in order to be sure of growing large solid heads before the time that cold weather puts a stop to further growth. I did sow some seed of these vegetables, however, even earlier than I had been in the habit, but very few of the seeds sprouted, especially of cauliflower. Then after the last rains most of them came up rather late. I have also sowed another lot in the now moist soil, and they grew promptly. Perhaps I may yet succeed in getting good heads from these late-sown or late-sprouted seeds. Just now vegetation seems to be making up for lost time, and one can often see the difference from one day to another. The carpet or mulch of fresh manure that I am now spreading all over the ground between these late cabbages and cauliflowers gives them a great advantage. They feel at home in the moist ground, no matter how hot the sun or how dry the atmosphere. I have never yet failed to get good cabbages and fine cauliflowers for late fall and winter use from plants thus started and managed.

* * *

Winter Radishes.—It is now time to sow seed of the winter radishes. I am very fond of the rather pungent kinds, like Black Spanish, etc. Some people prefer the beautiful Chinese Rose, which is too sweet to suit my taste. Years ago I thought much of the Chinese Mammoth, a white, very large and exceptionally tender sort. I have not been able to get seed of it as it used to be. For this reason I have fallen back on the Long Black Spanish. It is not a great trick to grow any of these radishes in our usually favorable fall weather. Have the ground well prepared and reasonably fertile. Sow seed thinly in drills which should not be less than fifteen inches apart. Begin using the hand wheel-hoe as soon as the plants are up. Remove all weeds early. They grow very fast just at this time. Then thin the plants to stand not less than three inches apart in the rows. Chinese Rose might be left two to two and one half inches apart. Possibly the last-named will take well in some markets. I have never tried it as a market vegetable. All winter radishes are best for table use when cut or shaved in slices across, say one eighth to one fourth of an inch thick, and piled up, slightly salted, on a plate, to stand an hour or so before being used.

* * *

Celery Hints.—South of Philadelphia or Cincinnati it is still time enough to set celery for fall and winter crop. The method usually employed there is to plant in beds six feet wide, with alleys of same width between each two beds. The space for the plants is slightly excavated, say four inches deep, and the plants set in rows

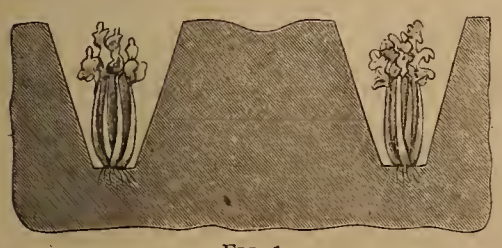


Fig. 1

across the bed, which rows are one foot apart, while the plants in the rows are set six inches apart. The bed is then gradually filled up with earth from the alleys. The prime condition of success in growing celery thus closely together is an excess of available plant-foods in the soil. It is not enough that we use plenty of manure in the soil, but this manure should be old, that is, well rotted and intimately mixed with the soil. I wonder what success Southern people would meet if they were to try the old plan of planting in trenches. Have any of the Southern readers of Farm and Fireside ever tried it? Sometimes I have a notion to plant a patch in this way again. The chief difficulty here is the fact that in order to go a foot down into the ground we have to dig up a portion of the hard clay subsoil. Of course, we have to set the plants in good surface-soil. After the trench is dug a lot of fine manure and good surface-soil, well mixed, must be put back into the trench, say not less than four inches deep, and into this the celery is planted. We may have a single or a double row. I am now quite in favor of making double rows in any way we many plant. It gives double the number of plants, and requires only one banking, boarding or filling up.

* * *

In reality there is little difference between the old trench system and the mulching system as now practised by me. The illustrations will make this plain. Any way the principle is the same. Fig. 1 shows the young plants in the bottom of the trenches, with banks of earth between the rows. Fig. 2 shows the double rows on the surface of the ground, with banks of coarse manure between each two double rows, the manure being held up and away from the plant-rows by boards set up on long edge on each side of each double row. In either case the plants are protected from drying winds and heat. In the mulching system we have another advantage. If weather is very dry and hot we can let a stream of water (if we have it) soak through the manure, thus forcing rapid growth of the plants in any kind of weather by means of the easily assimilated plant-foods which the water dissolves from the manure and carries down to the roots of the plants. With celery thus managed and protected there will be very little chance for rusts or blights to attack the foliage; but if they do, spraying with Bordeaux mixture in the earlier stages of growth, or with a weak solution of copper sulphate, will restore the plants to health.

* * *

Hen Manure.—I have always valued the droppings of poultry very highly as a garden manure. It gives us a chance to produce foliage and stalks of the thriftiest kind. For that reason I usually reserve all poultry manure for growing celery and celery-plants, spinach, onions, lettuce, etc., and I believe

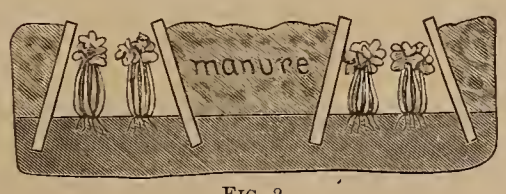


Fig. 2

that the same material would come very acceptable for growing winter (hothouse) lettuce. A writer in "American Gardening" says that for greenhouse purposes he composts the poultry manure with five times its amount of soil, or better, sods, and adds to every barrel of the manure fifteen pounds of pure ground bone and five pounds of sulphate of potash. The whole is to be cut down and well fined and mixed before using.

* * *

Cheap Bunching-onions.—I have sown another long row of Gibraltar onion, using seed very thickly, in fact, as thick as we sow it for sets (about sixty pounds to the acre). The only difference is that I select very rich ground for my rows, while for sets the soil should be only fairly fertile. This row is intended for latest bunching-onions. I sow a row or two every few weeks during spring and summer, and what a lot of stuff for green bunching one can pull up from any such row! People like young small onions to eat with bread and butter, and they consume great quantities when such mild sweet ones can be had as the Gibraltar or Prizetaker. I prefer the former; it is thriftier and very mild. The onions, with bulbs from one half of an inch to one inch and more in diameter, stand very thickly in the row. It takes only a couple of inches of row to furnish material enough for one bunch, and I am selling three bunches for a nickel. This gives us about a penny for every inch of row, the row requiring a space of twelve inches or less in width. This makes $10 to $12 for a hundred feet of row, or at the rate of $4,000 to $5,000 an acre. Figuring on the acre rate, of course, is idle speculation. We can't sell more than the product of a few rows at retail rates, and only a reasonable amount at wholesale at half or one third the retail price. What I wanted to demonstrate is merely that it is very easy to produce all the bunching-onions any one may need for late use and summer and fall sales, and that the cost of producing them is trifling—virtually next to nothing except cost of seed. I believe that the consumption of these small onions could be largely increased, and would be doubled and trebled if all would grow the sweet Spanish varieties, like Gibraltar and Prizetaker, and let people find out that an onion is not necessarily a thing that will bring tears to people's eyes. I find that I can eat quite a quantity flavored with a little salt or with vinegar and salt with my bread and butter for supper, and that they have a good effect on my general health. T. Greiner.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

Injured Strawberry-plants.—A. B. H., Penn's Station, Oreg. The injury to your Red Jacket gooseberry is undoubtedly caused by some disease, but what it is I cannot tell from your description. I wish you would send on samples for examination. From your description I should think it a sort of gooseberry-twig blight, for which I know of no remedy.

Prickly-ash for Hedge.—C. S. W., East Palestine, Ohio. The leaf you inclosed is that of prickly-ash, but it is not desirable as a hedge for turning stock, as it does not grow close enough and is hard to maintain. A far better hedge-plant for such a purpose is Osage orange, which is one of the best for this purpose. Honey-locust also makes an impenetrable stock fence, and bears pruning well.

Apple-blight.—W. C., Matthews, N. C. The injury to your apple-trees is probably caused by blight, which commonly injures the apple in the West, but only occasionally attacks it in the East or South. Some varieties are more liable to it than others. The proper treatment consists in cutting off and burning the diseased portions. It seldom continues injurious for more than a few weeks each season, and may not attack your plants again for several years.

A Maple Grove.—Z. N. T., Dalton, Pa. The best way to start a young maple grove is generally by planting out young seedlings. These can be bought for from $3 to $6 a thousand, at one year old. They may be successfully planted in the fall if the soil is moist and is very carefully firmed around their roots and they are mulched a little to prevent "heaving out" by frost in winter, but your safest plan would be to plant early in the spring.

Tent-caterpillar.—N. A. W., Lost River, W. Va. The egg masses sticking to and surrounding the twigs on your apple and peach trees are those of some tent-caterpillars. If they are gathered and destroyed, just so many colonies will be killed as you destroy egg masses. If this cannot be done economically care should be taken to spray the foliage as soon as the young hatch out, using Paris green, one pound, and water, one hundred gallons. The old nests do no serious harm, except to indicate slovenly methods, and should be removed. The caterpillars will probably be very numerous if you did not take remedial measures this spring. For lice on apple-trees you can use tobacco-water, made the color of strong tea by pouring hot water on stems or leaves, and it is a good remedy.

Cherry and Apple Seedlings.—M. E., Sussex, Miss. Cherry-pits should generally be mixed with moist sand and buried in the ground outdoors as soon as gathered, and then planted early in the following spring. If the seed gets very dry it may not sprout readily until one year from the following spring. A common and very good way to handle them is to sow in good soil as soon as gathered, covering about two inches deep, and then put on several inches of hay, which should remain until the following spring, when it should be removed and the soil loosened. But in this case lookout should be kept for squirrels which are liable to dig out and eat the seed. The rows should be about eighteen inches apart. Apple-seed may be successfully managed in the same way as cherry-pits. The soil in either case should preferably be light but rich, so it will not pack too hard in spring.

Gumming.—D. C. S., Port Angeles, Wash., writes: "What is the cause of cherry-trees bleeding to death, and what is the remedy? I have lose several the past year, generally the Queen Ann, which is the best cherry we have in this country. Some of the trees were in bearing. They bleed in spots, from the ground away up into the limbs."

Reply:—The disease to which you refer is known as "gumming," and is very serious in your section. No remedy is known for it and the cause is not understood. It seems to be the general opinion of many who are acquainted with it that it is most liable to attack trees with exposed trunks, and low, close heading is recommended as being desirable for this and other reasons. Some varieties are much more susceptible to its injuries than others. Some growers recommend slitting the bark, but this is of doubtful utility in this case.

Downy Mildew—Leached Wood Ashes—Bean and Pea Weevils.—H. E. B., Gibsonburg, Ohio. The leaves received are probably affected by what is known as downy mildew of the grape. It is very commonly injurious to the vine. This disease often causes the leaves to turn yellow, dry up and drop off, and is very injurious in many sections. After the leaves come off, of course the fruit stops growing. The vines usually continue growing and produce a weak growth from their tips. Some varieties, notably Delaware, Lindley, etc., are especially liable to it. It may be prevented by spraying with Bordeaux mixture sufficiently often to keep the leaves coated with it, about four times, and the work should begin early. If it is necessary to spray after the fruit is full-grown the copper-carbonate solution should then be used, but this is not generally necessary.——Leached wood ashes is practically of no value whatever for crops, and is not worth bothering with. On sandy land, however, they may sometimes be used to advantage to help make the soil more compact.——There is practically no method of protecting peas or beans from weevils after they are planted. Protection is most generally secured by late planting, so that the plants are not in flower when the mature insects are ready to lay their eggs. The eggs are laid on the ovary when the plant is in flower, and the larva eats into the seed, and the hole by which it enters is so small that it grows over completely, and from the outside there is nothing that indicates the presence of the larva in the seed. The insect undergoes its changes in the seed.

Injured Apple-trees.—F. C. A. M., Jasper county, Ind. I do not know what can be killing your apple-trees, but it might be blight, borers or other causes. You will have to examine carefully for borers, and describe to me the symptoms more carefully, or I cannot answer you intelligently. Fruit-trees of all kinds that are overloaded have their fruit improved and carry the load with less injury when thinned than when allowed to overbear, and the fruit generally sells for a higher price, as it is larger on account of this and generally fully as large in yield. The help to the tree from thinning consists in relieving it from maturing so many seeds, the doing of which is very exhausting to the tree, while the growing of flesh is not a great burden, as it is composed largely of water. The work of thinning should be done as soon as the fruit is well formed. As a general rule, heavily loaded trees or grape-vines should have about one half their crop taken off, and this will often look like waste when it is done. It is a good plan to thin out clusters where fruit hangs closely rather than remove the fruit entire from any branches.

Improving Wild Strawberries—Best Apples.—J. C. S., Emo, Ontario, Canada. If you wish to improve your native strawberries by crossing you can use almost any of the good cultivated sorts to good advantage, and it matters very little which, as the results from crossing are very uncertain, and what you need most is to get it to vary from the wild type and then improve the seedlings by selection year after year. If you undertake it you have a long job, but a very interesting one. You should raise many seedlings after making the cross, and select those that vary most from the type, even if they are not the best, as such are most likely to produce widely varying seedlings. To improve such a plant you must get it to vary first and then raise seedlings and select. This is the method used by Luther Burbank, who originated the Burbank potato and more good fruits than any other man who has ever lived. Perhaps you would get best results from some strongly bi-sexual variety to cross with your native varieties, such as Beder Wood or Lovett.——I think you had better write to your experiment station at Guelph for a list of the best varieties of apples for you to plant.

Preserving Fruits.—R. M. R., Eldridge, Iowa, writes: "Please give me a receipt (if possible) for preserving fruits, such as apples, pears, plums, peaches, quinces, etc., so that they will keep and retain their natural color and shape. I don't want anything to preserve them for eating purposes, but something to rub over them so that when they are put each in a separate glass jar they will look natural for show purposes. It may be poison for all I care."

Reply:—There is no known material that will preserve fruit without injuring its color. It is easiest to keep light-yellow colors, but reds are easily soluble in all the preserving compounds used. Last week I had the pleasure of looking over the board of trade exhibit of preserved fruit in San Francisco, and learned that they have used much sulphurous acid, but are now largely using water containing about one and one half per cent of formaline and some glycerin. The latter material is varied, but for grapes it is used at about nineteen ounces to the gallon. For beans, peas and similar vegetable tissues Dr. Kedzie recommends one half glycerin and one half water. In my own experience I have found a two-per-cent solution of formaline very satisfactory for plums, grapes, etc.

Peach-borer—Summer Pruning—Protecting Cut Surfaces.—H. R., Bowling Green, Ohio. The gum on your peach-trees is probably exuded by the tree from holes made by the peach-borer. It is very common. The remedy is to clear away the gum and dig out the worms with a knife in May, and again in August. If soft soap is then applied, and the trunks kept covered with it, the borers will probably be kept out, but the trees must be carefully looked over for borers at least twice each year. Fir-tree oil would be a preventive, but I prefer the soft soap, especially if a little milk of lime is added to it to make it flow easily. It is not generally necessary to fill wounds with wax, but it is a good plan to do so.——Light pruning of peach or plum trees may be done in June or as soon as the crop is off, but heavy pruning should be done early in spring. Foliage removed in summer checks growth and the development of the fruit.——Limbs two or three inches in diameter that are cut off should certainly have the cut surface protected from rot fungus, and the best treatment is by covering with wax; but in the case of willows, cottonwoods, elms and similar trees a good thick coat of white lead is sufficient, and often they will do very well without any protection.

THE POULTRY-YARD

Conducted by P. H. JACOBS

HAMMONTON, NEW JERSEY

COLD-STORAGE EGGS

COLD storage of eggs opens opportunities for the sales that would not otherwise be afforded. Objections may he made to them hy some, but they are nevertheless a necessity at the present time, as they relieve the market of the surplus during certain seasons when the supply of eggs and poultry is unlimited. The eggs are kept at a temperature just above the freezing-point, the object being not to allow them to become frozen, and at the samc time to keep them in a condition which prevents any changes. The main objection to the system is that the eggs are sold as "fresh laid," which is an imposition on the purchaser, and there seems to be no way to overcome the difficulty. There should he a law compelling those who suhject eggs and poultry to the cold-storage process to label or mark them in such a manner as to make the fact known, the same as is done with bogus butter. If any one wishes to purchase cold-storage materials the right to do so should not be denied them, but to sell cold-storage eggs as "fresh laid" is a fraud and imposition. When poultry is kept hy the cold-storage process decomposition hegins as soon as the low temperature is removed, and the meat becomes flabhy. Any person who has compared such poultry with that which is fresh can easily detect the difference, but the great army of buyers are ignorant of the fact that to a certain extent cold storage destroys the quality, and they willingly huy an article that has heen preserved hy cold storage, believing it to he strictly fresh, although they would not do so if they were informed of the facts hy proper labels or marks.

COMPARISON OF BREEDS

When more than one hreed is kept it is proper to compare them and learn. It has been claimed that the same number of pounds of flesh can be produced from one breed as another on the same amount of feed. A trial of that kind requires a nice arrangement of details, for a Brahma chick will not readily fatten. It must grow in spite of all that may be done. The legs will become longer, the formation of feathers will be slow, and everything will seem devoted to growth. This alludes to the first five or six months; after that time the chicken begins to thicken and assume its proper form, and then the time will have arrived for attempting the gain of weight. In the next yard, as a comparison with the Brahmas, the chicks of the Plymouth Rock breed will show a different manner of growth. They do not run to legs, and up to three months—not six—they will he compact, solid and heavy; but after three months they begin to "attain their legs," as the saying is, and grow upward. Here it may be noticed that for the first three months the Plymouth Rocks will take on more flesh and carcass than the Brahmas; after that time the rate of increase is alike; but after the six months have passed the Brahmas will no doubt surpass them. So far as the Leghorns are concerned they will finish their growth when six months old, and will be small. At no period will they compare with the other two breeds in weight, but they will grow fast and thrive, the pullets beginning to lay when five months old.

ROUP

When roup appears in the flock and rapidly spreads the probability is that it is in a form that is highly contagious, and that some hen in the flock has caused all the trouble. A fowl may have the germs of roup within itself which may remain dormant for weeks or months under good conditions and surroundings, but the first exposure to cold may be the beginning of its appearance as an ailment, and other fowls in contact with it that drink from the same water-fountain or pick over the same ground may become affected, and it then spreads from one to the other. It is best at such a stage to destroy all sick birds, disinfect the premises and get new stock. Throat diseases in fowls are very near that of diphtheria in humans, and the sooner such affected fowls are destroyed the better, as no treatment can be given without frequent handling of the sick hirds. One of the hest remedies is to sprinkle a pinch of chlorate of potash on the roof of the mouth and down the throat at night, with a swabbing or spraying of one part peroxide of hydrogen and three parts water in the morning. It may happen that certain fowls or breeds are more suhject to it than others, which denotes that the birds so affected belong to a family that is more liahle to the disease than others. In all cases he sure to avoid drafts of air, and reduce the grain in the food, as it is heating, using lean meat and a variety of food.

DRY DIRT AND THRIFT

Whenever a fowl is noticed busily dusting itself it signifies that the bird is happy and in good health. The hath is positively essential to its thrift and comfort, and without it no flock will prove remunerative. As the fall comes on the supply of dirt must be stowed away for the winter bath, for with the earth covered with snow and everything frozen hard it is not an easy matter at that time to procure it. At the present time it is only necessary to keep a yard spaded fine, even if only a few feet square, in order to give the fowls a chance, but in winter there must be dust-boxes, and the dirt should be fine and perfectly dry. A few barrels should he placed in the cellar and filled with sifted earth or coal ashes, there to remain until dry dirt becomes scarce, which is always possible in winter. Coal ashes may be added during winter, for many have a certain quantity then; but it is very little trouble at the present time to lay up a store of dirt. Never use wood ashes, for should the fowls get wet the caustic properties of the ashes will irritate and perhaps injure them.

BANTAMS

Bantams are profitable, and not only are they beautiful, but the profit derived from a flock of the little pets is considerable. Taking into consideration the time it takes for them to come to maturity, the very small amount of food consumed and the reduced space required to accommodate them, the bantam hen will lay as many eggs as a large one, and three times the number of chickens can be kept in the space without crowding. Taking everything into consideration, they will yield a larger profit in proportion to cost than the larger varieties, especially as in the weight of eggs in proportion to the size of the birds they largely excel all others. Bantams make the prettiest of pets, their small size being a great advantage in that respect. They are very easily tamed. The general care and management of these little fowls is the same as for the larger birds. The Bantam is growing in puhlic favor more and more every year, and they are great favorites with children.

THE POULTRY-HOUSE

Attention is called to this matter, as the poultry-house for winter must be built now. Where nearly all mistakes are made is in the ventilation. It cannot be explained why the large majority of poultrymen should go to the expense of using double walls and tarred paper to keep the house warm, and then have an upward current from the floor to cause the cold air to rush in that the vacuum may be filled when the warm air goes up the ventilator. It should be borne in mind that ventilators do not always carry the air upward, whether the ventilator is situated at the top of the house or within one foot of the floor, as something depends on the direction of the wind, and the cold air is just as readily admitted by the floor ventilator as by the one at the top.

NOTES FROM CORRESPONDENCE

A RECORD FOR WINTER.—I noticed in a recent issue a report of poultry profits from "R. N. D.," Delaware, Ky., and herein inclose a report of mine for the same year, 1898. In January I had a flock of forty hens, killing from time to time. The following July I had but thirty, and during the year I sold to customers 314 dozen eggs and set ten dozen, besides what I nsed in a family of three, of whlch I kept no account. From the eggs set I raised sixty chickens, eating what we cared for and selling the rest. Some of the pullets commenced laying in Septemher. For eggs sold during the year I received $76.32, and for poultry, $17.25. My fowls are wholly a mixed flock—Light Brahma and White and Barred Plymouth Rocks—and are yarded except as they are let ont for an hour at night. I feed all kinds of grain and cahhage every day or two; also keep them scratching in litter. In January, 1899, I had a flock of forty-six, and np to April 1st I have sold $30.64 worth of eggs, hesides what I have used in the family, and $4 worth of poultry. In March I sold forty-seven dozen eggs, and five of the hens were sitting. L. C. U.

Southington, Conn.

HER PROFIT FROM TURKEYS.—I am going to relate some of my experience in poultry-raising for the past year. Turkey-raising, I helieve, is a very profitahle as well as healthful exercise for farmers' wives and daughters. Last year I kept five turkey-hens and one gobbler. Two of my turkey-hens died early in the spring. One of them laid eleven eggs hefore she died. She was sick with cholera part of the time while she was laying. At first I hesitated abont setting those eggs on account of the turkey-hen being sick, but afterward I set them, and they proved to be as fertile as any eggs. Eight young turkeys hatched from those eleven eggs. At first I set all the eggs the turkey-hens laid before wanting to hatch under the hens, which was sixty-seven in all. I cannot tell the exact number of turkeys hatched out from those sixty-seven eggs, bnt I raised forty-five of them. I kept the hens shut up in coops for ahont a week at first, until the turkeys became large enough to run after the hens. I inclosed a small yard in front of the coop with boards, for the little turkeys to run around in the daytime, so they were ont in the fresh air and sunshine every day. When they hecame ahout a week old I let the hen and turkeys ont every day, unless it was raining. I fed them on curds, stale hread soaked in milk, and chopped onion-tops for the first month. After the first month I fed them middlings wet with milk, and oats as soon as they were able to pick up the oats. I gave them plenty of fresh, clean water every day. I gave the old hen a dust-bath to kill the hen-lice immediately after taking her off the nest. I also treated the young turkeys every week for lice, which are so destructive to young tnrkeys. During the time those eggs were hatching my three turkey-hens laid thirty-nine more eggs, two of them laying under some trees near a fenee. After they commenced to hatch I moved them to a nest which I had prepared for them in the barn. I kept them shut up for a few days nntil they became accustomed to their new nest. After that they would come off and go on themselves. Those two turkeys hatched from twenty-seven eggs only twenty-one turkeys. I took them off the nest and started them off to make their own living through the fields. This was in July. They came home every night, slept in the barn, and were gone in the morning before I could get out to feed them. The third turkey-hen lost all her eggs; something took them from her nest one night, so she did not raise any young ones. This made fifty-nine in all that I raised this year. I dressed fifty of them at Christmas and sold them in Milwaukee hy wholesale. They weighed 567 pounds, for which I received eleven cents a pound, which amounted to $62.37. After I started to fatten them in November I fed them twenty-five bushels of corn, which was worth ahont thirty cents a hushel, so I think I have heen well paid for my experience. I kept five turkey-hens and one gohhler for next year, and expect to devotc more of my time to them. I also keep a number of hens, from which I am making a small profit. I attend to them myself, and enjoy the work very much.

Calhoun, Wis. MRS. J. C.

INQUIRIES ANSWERED

Ducks.—E. S., Pern, Ill., writes: "Myself and neighhors have difficnlties with our ducks. They become weak in the legs, have vertigo, and die.

REPLY:—The cause is heavy feeding in very warm weather. Grass is sufficient for them at this season. The quarters should he very dry and well littered with clean straw.

Poultry-house.—S. C. F., Erie, Pa., writes: "What size should a poultry-house be for twenty-five fowls? Also size of yard?"

REPLY:—A house ten by ten feet can be made to do service for that number, but the fowls will thrive hetter in a house ten by sixteen feet, the yard to be not less than ten by one hundred feet, the larger the better.

Fleas.—L. K., Antwerp, Ohio, writes: "I have a hen-house (built of logs) that has become infested with fleas. Where they came from I do not know. How shall I get rid of them?"

REPLY:—A thorough drenching of the house inside and outside with kerosene emulsion should destroy the fleas. It should be done twice a week, and the ground near the house also sprayed. The advertised lice-killers will he found excellent for the purpose.

Food for Young Turkeys.—L. H. S., Port Crane, N. Y., writes: "What is a good food for young turkeys? Mine are dying off."

REPLY:—Stale hread and milk, onion-tops, milk curds and millet-seed when they are very young, but when fairly under growth give them a variety of any food that they will accept. They can secure a large share if on a range. It is probahle that your young turkeys are being destroyed by the large lice on the head and neck. Anoint with a few drops of melted lard.

WHY TOM LEAVES THE FARM

THE noblest occupation of man is agriculture. So have declared the poets, the philosophers, and the great minds of all ages. It is the nearness of Nature that ennobles, and no occupation of man brings him so near to Nature's heart as tilling the soil, planting the seed and reaping the harvest. Yet the boys born on a farm rarely follow the occupation of their father unless duty or necessity compels them to.

A number of influences have been at work on Tom since boyhood, filling his mind with dreams of the city, the sea, the factory, the shop, or any employment at which a livelihood could be earned rather than a life on a farm. Tom is not a fool. He can see and reason from observation. He sees his father, an intelligent, ambitious man, broken in health at middle age, compelled to work every day beyond his strength, working from dawn to dark, going to bed as soon as the evening chores are finished, too tired to rest, and rising again at daylight to begin another day of toil unrested from the previous day's labor. He compares this with the business or professional man's privileges, with the morning, noon and evening hours for rest, and an occasional holiday with no disquieting thoughts of stock at home, or of hay or corn needing his attention, to interfere with the rest of mind and body.

He compares his own privileges with his city cousin. Tom cannot remember when he had no work to do. The wood-pile was near the kitchen door, and his baby hands were early taught to fill the basket, too large for him to carry, with chips for the kitchen fire. Other little chores were added, and by the time he had reached the dignity of "pants" he had learned to play near the house within call of his tired, overworked mother. It is not long after that he one day, just to please his father, fills the feed-box and manger of the work-horses, and henceforth it is his business to keep them filled. Tom isn't tall enough to get more than half a stroke on the high wooden pump, but the boy can take his time and it will be quite a help to keep the watering-trough always full of water. Other little chores are added as time goes on, and gradually Tom takes his position as a part of the working force on the farm. He does not complain because he cannot find time to play, attend picnics and visit as does his city cousin, but he feels the difference nevertheless. He compares his own stubby, sunburned, toil-hardened hands with the shapely, nimble fingers of the other boy; notes the difference in his own awkward motions with the athletics of the village youngsters. He does not understand why it is, and in his mind concludes that the city boys must in some way be superior to him. But there will come a time when Tom will understand.

At school Tom is a bright boy. The manner in which his teachers speak of him cause his parents' hearts to swell with pride. His promotions follow in rapid succession, and he is the classmate of boys twice his age. But alas! There comes a time when Tom must stay out a few days to help at home, and these few days prove the forerunner of other days that follow, and Tom is forced to quit school. He tries to keep up by studying at nights, but finds it impossible to give the necessary attention after a few days' work. Perhaps he can attend school next term. He will make up for lost time then. But a late fall keeps him at work until near the holidays, and the spring's work takes him out before he has scarce attended the three months required by law. How Tom envies his city cousin who goes to school nine months out of the year, yet he does not complain. He does begin to think, however, that there is something better in life than what he is getting. But that thought does not cause him to put forth less effort. On the contrary, he works with greater determination, for he has not lost sight of the ambition of his life—to attend college. In the old days—only a few years, but seemingly an age to Tom—the father had said the boy should go to college if he continued to learn. He meant it then; but now in the hurry and drive Tom is no longer winning honors, and the college is forgotten, but not by Tom. To be sure, he was no longer among the smallest of his class; quite the contrary. But somehow he would get through, and then—

Tom is a steady, sober fellow, but like all young people, must have a little recreation, a few pleasures and privileges. But there is little enjoyment in society for him. His clothes have a "put-on-for-the-occasion" feeling that is embarrassing in itself, his feet worry him, and he does not know where to put his hands. He thinks, in his self-conscious way, that he is avoided, or worse yet, forgotten or unnoticed. Bitterly he notes the difference now which environment makes, and sees the popularity of boys whom he knows to be his inferiors intellectually and morally. He sees and complains bitterly at the fate that has set him without the charmed circle. He does not blame society. He knows he has little to offer the social world. He is only an awkward, sun-browned, ignorant farm lad. What interest could be taken in him among young men who had spent their lives in society?

Tom is not a fool. For a time the family notice that he goes about in a preoccupied manner. He is thinking deep and hard. In fact, it is the crisis of his life. One day he braces up and talks to his father and tells him that he is determined to quit the farm. Tom has always been a good boy, faithful and trusty, and so obedient that now as the father is a little angry his son is told plainly that he is not to think of leaving the plow. Tom makes no reply, yet there is a momentary flash of the eye and hardening of the muscles in the face that remind the father that in a short time, a very short time, Tom will be his own man. Then he tries reasoning, but Tom meets his every argument, and in the end the man in his heart admits that the boy is right. Too late he realizes that good, noble-hearted Tom has always had a hard row to hoe, and that he is ill prepared to battle with the world. A hard fight it will be and the issue not certain. Other boys are ready to take up the real burden of life, but Tom must spend the years of early manhood in preparation.

Will he win? If an indomitable will, an unconquerable ambition to rise, can overcome obstacles that might daunt a Hercules with a physique weakened by overwork, Tom will do it. And if he lose? Only one more martyr to a mistaken idea of economy. Only one more life ruined by a system that tends to leave only the slothful and unambitious boys on the farm, while those who wish to rise higher are forced to seek other walks in life.

The noblest heritage a father can pass on to his son is a good education and a sound body. The average farmer, through ignorance or neglect, gives neither, sacrificing both to the one idea of gain. In romance and poetry and the minds of people generally the farmer boy is the picture of health. This is far from the truth, however, as a little observation will show. Twenty per cent of the farm boys examined in Kansas failed to pass in the examination for enlistment under the first two calls for volunteers after war broke out with Spain. Of course, it was only the strongest and healthiest who attempted to pass. I venture the assertion that, taken as a whole, forty per cent would fail. Heart disease, lung trouble and rheumatism were the usual ailments, nine times out of ten caused by overwork.

JIM L. IRWIN.

SOW PURE SEED

In your issue of July 1, 1899, page three, I noted an item by Fred Grundy on weed-seed. Mr. Grundy's experience is the same as that of hundreds of farmers, but still they never think to have their seed tested before planting. The Department of Agriculture has offered for several years to test seeds for farmers, but the samples do not come in as they should.

I hope your readers will make note of Mr. Grundy's experience, and send us samples of their clover and grass seed before planting. It is a good plan to buy seed early, and send us a sample before the busy time comes, so that we can answer promptly.

Very truly yours,
A. J. PIETERS,
In charge of Pure-seed Investigations.
Washington, D. C.

EXTRACTS FROM CORRESPONDENCE

FROM MISSOURI.—Ripley and adjoining counties are very rough, only the creek and river valleys being susceptible of cultivation. During the spring and summer seasons the wild grass grows in rich profusion, affording excellent pastures for horses, hogs, cattle and sheep, which thrive for seven months in the year without being fed. Farming and stock-raising is the principal industry. Corn is the main crop. There is always a local demand for it at forty and fifty cents a bushel. Lumbering is an important industry. This county is unsurpassed in the state for its beautiful scenery. The chief beauty of the hills is the evergreen pine, which, we are sorry to say, is rapidly being destroyed. Numerous springs burst forth from the hillsides and go rushing down the vales. To an admirer of Nature this is a veritable paradise. Unimproved land sells for from $1 to $3 an acre; improved, from $5 to $15. This is an ideal country for a man with moderate means.

Bennett, Mo. S. E. G.

QUERIES
READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Queries desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Cucumbers After Cucumbers—Cotton-seed as Fertilizer.—C. B. M., Hague, Fla. It is always better and safer to rotate crops than to plant one and the same in succession on the same ground. It may work all right in some cases, however.——The oil in cotton-seed is mostly carbon and of little value as a fertilizer. I would just as soon have the residue after the oil is pressed out.—T. GREINER.

Tomatoes in the Winter.—C. E. C., Montpelier, Ky., writes: "Tell me how to keep tomatoes fresh through the winter."

REPLY:—In the fall select thrifty vines loaded with fruit. Protect them from the early frosts with a covering of cloth, old carpets, matting, etc. When there is danger of heavy frost pull up the vines and hang them up in the cellar. The fruits will ripen gradually, thus prolonging the season of fresh tomatoes until midwinter.

Cover-crop.—T. F., Minneapolis, Minn., writes: "I have some land which will be idle after September, and which I expect to use for gardening next year. Would it be beneficial to put in a crop this fall to be plowed under next spring? If so, what crop is best?"

REPLY:—The land would be benefited by having a cover-crop, and under the circumstances rye is the best to use. It is hardy and would make considerable growth in the fall and early spring. Plow under carefully, for any rye-plants left uncovered will be weeds in the garden.

Watermelons Rotting—Receipt for Soap.—T. R. K., Yemassee, S. C., writes: "Can you tell me why my watermelons rot on the end? Seed was bought from a reliable seedsman in Augusta, and planted in beds in light sandy land. I used one half bushel of compost from my cow stable to the hill, and one handful of fertilizer composed of cotton-seed meal, acid phosphate and kanit to the hill. Quite a number are rotten at the end.——Would be glad if some reader would give me a receipt for making soap."

REPLY BY T. GREINER:—Possibly the ground is made too rich. Watermelons will do best on land of medium fertility. Possibly some fungous disease is at the root of the trouble. ——Let the readers of FARM AND FIRESIDE respond with soap receipts. How do you make good hard soap with concentrated lye?

Bitter Cucumbers.—E. L. P., Wilton, Conn., writes: "Can any one of your readers tell me why cucumbers are bitter? I started a hill in a can in my little greenhouse very early. They are now in bearing, but every one so far is as bitter as quinine. I planted the New Everlasting. Had the same trouble last year. I then lived in the city and bought my vegetables of vegetable-wagons. I bought several, and every one was so bitter I had to throw them away. They were raised in the Springfield market-gardens. I have planted another kind now, hoping for better luck."

REPLY BY T. GREINER:—Every one who has raised cucumbers right along, whether outdoors or under glass, knows that we find occasionally a bitter specimen among them. I believe (but am not sure) that the plant, strain or sport is to blame; that all specimens on one plant which gives one bitter cucumber are bitter, and that the seed from such, if planted, will again produce a vine giving bitter specimens. If I am wrong in this I hope somebody who knows better or can give the true explanation will correct me.

Pickle Receipts, Etc.—S. E. S., Yazoo City, Mich., writes: "Please send me the receipts for making cucumber pickles that you published in FARM AND FIRESIDE last year, especially the one for putting them in ten-gallon jars and flavoring with dill-leaves, or any others that will make good pickles. Also how to put up cucumbers in brine to make pickles in winter. Also a receipt for making good vinegar, also one for making cabbage pickles."

REPLY BY T. GREINER:—Simply pack the cucumbers (nice large straight ones), after being soaked and washed in clear water, in jars or kegs with alternate layers of grape-leaves, dill, etc., and keep them weighted and covered with a weak brine. I usually take a pint of salt to a ten-gallon jar or keg. To lay down cucumbers for winter pickles, keep them covered (by weighting) with a brine made by using a bushel of salt to ten bushels of cucumbers. Good cider will make good vinegar in a short time if kept in half-filled barrels in a warm place. Cabbage pickles? I don't know.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

May be Spavin.—M. M., Burlington, N. C. Please consult answer headed "May be Ringbone," in present issue, because what has been said there in regard to treatment also applies to spavin.

Holds the Milk Up.—J. F., Parkville, Mo. Milk your cow crosswise; that is, the right fore teat and the left hind one together, and also vice versa, the left fore and the right hind teat at the same time, and you will have no (or at least much less) cause to complain.

Castrated Dogs.—W. J. C., Perry, Okla. Castrated dogs, particularly if castrated while yet young, as a rule will grow very fat and lazy, and not seldom develop a surly and disagreeable disposition. In my opinion, therefore, a castrated dog is of no use and not worth having, either as a watch-dog or as a herder or a hunter.

Died of Blood-poisoning.—S. F., Coloma, Wis. Your three-year-old colt which died three weeks after it had been castrated died of septicemia, or so-called blood-poisoning. Whether the mistake, gross negligence, was committed at the operation or afterwards cannot be decided without a thorough knowledge of all the particulars.

Elephantiasis.—C. R. M., Cherry Grove, Minn. If the diagnosis of elephantiasis, made by your veterinarian, is correct, and I have no doubt that it is, because your description does not contain anything to the contrary, his prognosis also is correct, because fully developed elephantiasis is known to every veterinarian as an incurable disease. If sores make their appearance, I have no doubt your veterinarian will be able to effect at least a temporary healing.

Weak Eyes.—A. H., Vermontville, Mich. The only symptom of the eye-disease of your horse, which seems to be affected in both eyes, namely, swelling of the eyelids, is unfortunately one common to several eye-diseases, and therefore by itself alone worthless for the diagnosis. You say that your horse has been affected since last winter, and intimate that the eyes are sometimes worse and at other times somewhat better, but do not state that a plain periodicity can be observed. Therefore I have to ask you to give a more detailed description, or to advise you to have the eyes examined by a veterinarian.

New Hay.—J. L., Negamee, Mich. Your friend is right. New hay, even if ever so well harvested, is a dangerous food if fed exclusively or in large quantities. The danger, however, almost entirely disappears if it is fed very sparingly or mixed with some old hay. It will probably not be necessary to state that a great deal depends upon the individuality of the horse, that some horses are much more easily affected than others. If you have no old hay, and are obliged to feed the new hay in considerable quantities before the process of fermentation going on in the new hay is completely finished, you can ward off most of the danger by giving to each horse with every meal a small pinch of salt.

Probably Slight Attacks of Colic.—D. B. I., Claremont, Cal. What you describe appears to be slight attacks of (habitual) colic. These attacks as long as only slight are not dangerous and do not require any treatment, but they are troublesome on account of their frequent occurrence, and as a rule, they gradually increase in severity until finally one becomes fatal. The best you can do is to keep your horse on a very regular diet, never to feed a heavy meal immediately before or after hard work, and if possible, never to allow this horse, nor any other one, to drink any water contained in ditches or pools draining a horse-yard, a manure pile or a public road, and then the attacks, if not entirely ceasing, will very likely decrease in frequency.

Swelled Pasterns.—F. M. K., Oquawka, Ill. If the swelling in the pastern-joints is supported by existing sores on the posterior surface between the fetlock and the hoof the sores have to be brought to healing. This usually can be done in a few days by making twice a day a liberal application to them of a mixture composed of liquid subacetate of lead, one part, and olive-oil, three parts. If there is yet lameness, the horse must have strict rest until the lameness has disappeared. If there are no sores, the swelling existing in the connective tissues is best removed by the use of judiciously applied bandages, to be removed and to be re-applied every night and morning, or if all lameness has disappeared, to be kept on only during night-time, and the horse to be exercised in daytime. Bandages of woollen flannel are the best, and the bandaging must invariably commence at the hoof.

May be Ringbone.—M. L. J., Zucker, Cal. According to your description (the sketch you speak of has not come to hand) the hard swelling, if on the coronet-joint, or joint between the first and second phalanges, is probably a case of ringbone. If the horse is not lame a treatment is not indicated, because the hard swelling, caused by an enlargement (exostosis) of the affected bones, does not yield to treatment; and if the horse is lame the treatment applied for the purpose of producing ankylosis (a firm union between the diseased articular surfaces of the affected bones), and thus freedom from pain, will remain without result if applied in the fly season or at a time at which the horse cannot have strict rest for at least two months. The same as last year full instruction for the treatment of spavin and ringbone will be given this year in one of the November numbers, consequently at a time at which a horse can have rest.

Probably So-called Dog Distemper.—P. H. L., Beebe, Ohio. Although I do not understand what you mean when you say "their heads burst and run," the disease you attempt to describe, and of which you give some symptoms observed in an advanced stage of dog distemper, is very likely this disease. This disease, as a rule, will speedily yield to treatment if the affected dog receives during the first stage of the disease a good emetic composed of powdered white hellebore (veratrum album). The dose is from two to ten grains, according to the size and age of the dog, and may be repeated in about twenty minutes if the dog within that time has not vomited. After the vomiting the dog will appear to be very sick for several hours, but after that will be all right and ask for something to eat, but when doing that should receive only very little food easy of digestion. If this treatment is applied too late, or for any other reason should not be productive of the desired result, the further treatment, usually not very promising, must be a symptomatic one, cannot be prescribed beforehand, and must be left to a veterinarian who has an opportunity to examine his patient before he is asked to prescribe. Powdered white hellebore is best administered rolled up in a very thin slice of meat.

Several Questions.—S. R. G., Osage Mills, Ark. 1. Undoubtedly there are cases of tuberculosis (among cattle) as well in Arkansas as in any other state or country. I do not know of any reason why your state should make an exception. As a rule, though, cases of tuberculosis are more frequent in states, districts and localities in which the population is denser and in which the cattle (milk-cows in particular) are more or less kept on artificially prepared food and shut up perhaps most of the time in crowded, damp and illy ventilated stables than in states and districts in which the cattle are allowed to live a free outdoor life. 2. I cannot tell you whether or not your cow is tuberculous. The diagnosis is not by any means that easy. What you say about her udder and her milk may possibly be due to tuberculosis, but may also have entirely different causes, such as defective or not sufficiently frequent milking, and unsuitable diet, etc. 3. I cannot tell you whether or not your state has a state veterinarian. Probably any state official, senator or representative or the editor of your local newspaper will be able to tell you. Some states have a state veterinarian, while others are far behind the times and have none. So, for instance, the great, wealthy and populous state of Ohio has no state veterinarian, but only a board of live-stock commissioners, composed of politicians, neither one of whom is a veterinarian. Your fourth question, therefore, I cannot answer.

Sore Withers.—J. M., Rio Blanco, Colo. According to your description it appears probable that beneath the "callous lump," as you call it, on the back of your saddle-horse the spinous process of one or two of the dorsal vertebrae have become involved and become necrotic at the end. At any rate, this would fully explain the condition as you describe it. The treatment in such a case consists in removing all the morbid tissues, not only the "callous lump," very likely originally composed of luxuriant granulation, or so-called proud-flesh, but also the necrotic end or ends of the spinous processes of the vertebrae. Whether this is done by means of the surgical knife or by means of caustics is not very material, provided that everything that has undergone morbid changes sufficient to destroy its vitality is removed, and nothing else. Then after the wound has been thoroughly cleaned and been made aseptic, a dressing twice a day with a mixture of iodoform and tunic acid, equal parts by weight, will effect a healing, provided that wound and dressing receive protection and the horse has strict rest—is not only not used as a saddle-horse, but is also exempted from all other kind of work until a perfect healing has been effected. If there is where you live any possibility to have the necessary operation performed by a competent veterinarian, I advise you to let him do it; but if there is not, ask your family physician to assist in performing the same. It may be that in your case it will be sufficient to destroy the "callous lump" with caustics, for instance, finely powdered sulphate of copper, and to bring the necrotic end or ends of the spinous processes to exfoliation by cauterizing the same with a red-hot iron. But really all this can only be determined after a close examination by one perfectly familiar with the anatomy of the parts in question; hence my advice to employ, if possible, a veterinarian.

MR. EDITOR:—My crop of Fultzo-Mediterranean Wheat yielded 3,309 bushels on 80 acres. Average over 41 bus. Part of it was on corn ground, which cut the average down considerable. I raised it for J. R. Everitt, Seedsman, of this place, of whom your readers can get free samples if they mention this paper. It is the greatest wheat I ever saw.

D. C. CHENOWETH, Indianapolis, Ind.

THE PROFESSOR'S TRIALSOME QUEST

By Annie Hamilton Donnell

PAVONIA CLAPP twisted her neat print apron nervously. It was not the first time she had found the Professor a difficult man to talk to—and to talk to about John Peter!

"The Lord help us!" murmured Pavonia, earnestly. She looked over at the Professor's intent, bending figure at the writing-desk, and knew she must begin all over again. "He's clean forgot I'm here at all," she groaned inwardly. Then she took two or three loud steps across the polished floor, making each one individually distinct and impressive. The Professor looked up.

"Ah, Pavonia, it is you? I did not hear you come in," he said, kindly. The intent expression on his face was changing to covert uneasiness. Sweeping-day came so often, and really he could not well afford to lose a minute's work on his magazine article—it was really most unfortunate.

The absence of a broom in Pavonia's hand and her general afternoon spic-and-span-ness failed to convey any meaning to the Professor. He got up and pushed together his papers with the resignation of despair.

"Very well, Pavonia, very well," he sighed; "but on no account dust these papers."

"For the dear land's sake, Professor, it ain't sweepin'-day," cried Pavonia, "it's a Wednesday! I didn't come in for that. I—I calculated it was time I told you about John Peter's not bein' willin' to wait any longer. I didn't like to trouble the Professoress."

Pavonia had always called the frail, sweet-faced little invalid wife up-stairs the Professoress. The Professor's face grew tender at once.

"On no account, Pavonia. You were right. On no account trouble The Little Woman!" he said, hastily. The Professor had always called her The Little Woman. "Come to me always. And—er—what was it you said? Simon Peter is waiting for me and is unwilling to wait longer? No, no, certainly not—show Simon Peter in at once, Pavonia."

Pavonia Clapp's good plain face reddened a little. "He ain't waitin' for you, John Peter ain't," she said, bluntly. "He's waitin' for me, and he says he don't feel to wait any longer. He's got the house all ready. He says—"

"Yes—er?" murmured the Professor, absently. He was fumbling over his pages of manuscript. "I think you said—er—"

"No, it warn't me, it was John Peter. He said he wanted to get married without any more foolin' round and waitin'."

"Ah!" The Professor woke up and relapsed again into dreamy abstraction in the brief interval of a moment. He had a faint glimpse of John Peter in the interval.

"Ah, certainly, certainly; let him be married at once—it is the common lot of man. Pray extend my congrat—"

"He wants to marry me," Pavonia interspersed, calmly.

"Oh!"

Pavonia! Simon Peter wanted to marry Pavonia!

The Professor gasped helplessly once or twice. The horror of life without Pavonia shut him in as with a fog of despair. In that moment the broom, even the broom was forgiven Pavonia. The Professor found himself offering as a plea for mercy the broom seven times a week. "And you can—er—dust my papers," he added, meekly.

Pavonia's light-blue eyes filled with tears. She put out one of her hard red hands and gently touched the Professor's slim white one. "For the dear land's sake!" she cried, unevenly, "I don't want to—it's John Peter! I've kep' puttin' him off till he up and ketched a-hold of the reins hisself. And now there ain't no puttin' John Peter off."

For a moment in the big sunny library it was quiet. The Professor was thinking of the seven peaceful years he and The Little Woman—and Pavonia—had lived together. He was telling himself how little of the fret and fuss of life outside had crept in to them—how only the shadow of pain had marred the serene peace. And in his heart the Professor recognized Pavonia's quiet share in it. He thought he would tell her so—it might overbalance John Peter, for at least an extension of their comfort—The Little Woman's and his.

Pavonia was thinking of the seven peaceful years, too. "But I'll stay until you get another girl," she began, eagerly, as if in self-justification. "John Peter'll have to wait that much longer. I told him so. I ain't goin' to leave you and the Professoress in the lurch; for the dear land's sake, no! I'll see to John Peter, but you'll have to hurry up—I don't know how long he'll stand it. There's plenty of girls—I suppose you'll see to gettin' one so not to trouble the Professoress?"

Pavonia's voice was undertoned with doubt. Her valiant faith in the Professor wavered before this new duty that seemed thrust upon him. She could scarcely imagine the Professor performing it, but Pavonia's imagination was not keen.

The Professor jumped into the breach with no hesitation.

"Certainly, certainly. I will attend to the matter myself," he said. The gloom was still in his face, and unconsciously his voice had reproachful notes in it. Pavonia winced unconsciously.

"It is a simple matter enough. I will attend to it at once—this afternoon. There shall be no delay. The—er—Simon Peter need have no uneasiness—no uneasiness at all."

If the bolt must fall, let it fall immediately. Certainly, certainly; the sooner the better. But The Little Woman must not be troubled. That was of paramount importance. The Professor and Pavonia were unanimous on that point.

A little later the Professor went down town to insert an advertisement—a cry for "Help"—in the daily papers. Pavonia had advised it. Before he started he ran up-stairs to The Little Woman's room. First and last the Professor always went there.

"Oh, Dear Boy, is that you?" The Little Woman cried, brightly. "How I've been listening for your leaps on the stairs!"

"And then how you heard them coming, Little Woman! You see my muscles haven't lost their college cunning yet. I believe I could play foot-ball."

"Never!" cried The Little Woman, in mock terror. She had drawn down the brown-bearded face to the level of her own white one.

"Dear Boy!" she whispered.

"Not with the capitals, Little Woman; begin it with small letters," he said, humbly.

"Small letters is it indeed? Not while you call me The Little Woman with a big L and a big W!"

"And if I didn't?"

"Not then, either!" she laughed. "It is Dear Boy, world without end, and I shall say it all capitals if I choose, sir—listen!"

She put her thin cheek to his face and whispered it, and all the capitals were in her sweet voice. After that the Professor had gone down town.

The next day he sat in his library and waited. It was half through the long warm afternoon when Pavonia ushered in the first caller. The Professor had his speech in instant readiness and hurried into it precipitately.

"You wish a—er—place? Certainly, certainly," he said. "If you will allow me a few questions. M—m—m— I have them here in their proper sequence. No. 1—How long—er—did you live in your last place?" Pavonia had told him to be sure and put that question in and he had given it the place of importance at the list's head.

"How long did you live in your last place?" the Professor repeated, not hearing any reply. Still silence. Out of kind-heartedness he went on to the next question. No. 1 was rather an embarrassing one—Pavonia had not thought of that.

"No. 2—Can you cook?"

"Can you cook plain cooking?" he repeated, gently. His eyes were still on the paper in his hand. "I will ask them all at once, and give her time to get up her courage," he thought, smoothing out the paper on his knee.

"No. 3—Are you accustomed to entertain much—er—company evenings?"

"No. 4—What wages do you expect?"

"No. 5—Are you accustomed to the care of—er—invalids?"

The Professor stopped abruptly. He wished he had not worded the last question that way. The hurt of it rankled in his heart. He and Pavonia never called The Little Woman an invalid.

A soft rustle of silk broke the silence in the room. The Professor glanced up to see his caller drawing a heavy silken wrap about her shoulders. She was standing, impressive and tall, against the background of books. She was smiling a little. Even to the Professor's unseeing eyes the air of perfect culture about her was puzzling.

"I called to recommend one of our girls to you. I belong to the Ladies' Co-operative Union," she said; "we have always a number of good girls who are seeking situations."

"Ah!" gasped the poor Professor.

He was virtually unconscious of what was said after that. He found himself a few minutes later at the window, watching the fine little trap drive away from the door. He was twirling a card between his fingers. The name on it, when he remembered to read it, reduced him to the extremity of horror.

"Her husband's worth a million if he's worth a dollar," he groaned. And he had asked her if she knew how to cook—and if she had been long in her last place—and what wages she expected! No. 1, No. 2 and No. 4 arrayed themselves before him in sardonic glee. Try as he might, he could not get out of their reach.

Pavonia opened the library door a little way and introduced her anxious face in the narrow slit.

"Well?" she cried, in a shrill whisper.

"Well?" echoed the Professor, stupidly. "Ah, yes—er—certainly, certainly. I asked her all the questions, Pavonia!"

Pavonia's whole figure appeared suddenly in the door. She indicated with her thumb the region of the late waiting-place of the fine little trap.

"You asked her all them questions?" she articulated, faintly. The Professor nodded gloomily.

"All them questions?"

"All them questions," repeated the Professor, mechanically.

"The Lord help us!" murmured Pavonia Clapp.

The next applicant had things all her own way. The Professor had put aside his neat little list of questions, and sat beside his tableful of papers in bewildered silence. It was the new applicant who asked the questions. She sat up straight and aggressive, on the edge of her chair, and plied them, one by one, with the regularity of a question-machine.

"Be you married?"

"Ah—certainly, certainly," murmured the Professor.

"Got a family?"

A family! The Professor pondered the question doubtfully. Had he anything like—a family? Ah—a light breaking in upon him—certainly, certainly, a family!

"Hey?" repeated the strident voice of the new applicant.

"Yes, certainly, certainly—a family," said the Professor, thinking of The Little Woman and Pavonia.

"How many?"

"Er—two."

"Two? Male or female?"

The Professor drew a long patient breath.

"Female—certainly!"

"Be they any trouble?"

The Little Woman and Pavonia any trouble! The patience vanished from the Professor's face like dew before the sun.

"No!" he thundered. The new applicant settled back on her chair with diminished assertiveness.

"I didn't know; children is sometimes," she muttered. "There was six to my last place—"

"And may be sixty 'to' your next!" cried the Professor, getting to his feet. "I will not take up any more of your time."

Two or three more women and girls called between midafternoon and candle-light, but the Professor found none of them satisfactory. One objected to the work; another wished to entertain her cousins in the parlor three evenings in the week, and the last one, a thin, worn little woman, with tired eyes, wished her children—there were four—to have the privilege of "running in" to see her at all times. Pavonia had provided very emphatic advice for such an emergency and the Professor remembered it just in time.

"I could not—er—allow that," he said, very gently, his kind face full of pity for the worn little mother. He could not bear to disappoint her. When she went away he had slipped something into her hand. "For the little children—certainly, certainly!" he had murmured, and the tired face was smiling all the way down-stairs and out into the lamp-lighted street.

The next day and the next were monotonous repetitions of the first one. The Professor went up-stairs to The Little Woman's rooms looking jaded and pale.

"Dear Boy, you are sick!" The Little Woman cried.

"Sick?" laughed the Professor, noisily, "Not a bit of it, Little Woman! I've only been working hard."

"Where have you been, Dear Boy?" persisted the sweet voice.

"In purgato—that is—er—in the library," the Professor said, hurrying on to safer ground.

On the third day of his inquisition the Professor had an engagement down town. He was on the examining board, and two or three new teachers were to be selected for vacancies in the city schools. The competitors met in the lecture-room of the high school to be examined. The board chose each an applicant to himself and the oral questions began. The teacher in front of the Professor was small and bright. The need of the work, and the file of little sisters and brothers toeing the line in the background of her thoughts lent painful eagerness to her manner. Her face was intently serious and little anxious lines creased its smooth surface and made it painfully wistful.

"How long were you in your last place?" questioned the Professor. His voice sounded mechanical, as if he were repeating a well-conned lesson.

"I—there wasn't any last place," faltered the girl.

"Can you cook?" went on the Professor, with mechanical promptness. He was ticking off No. 1 and No. 2 on his fingers mentally. No. 3 followed on their heels without space for replies.

"Are you accustomed to much—er—company in the evening (No. 3)? What wages do you consider essential (No. 4)? Are you used to the care of—er—invalids (No. 5)?

The Professor's rapid questions ended abruptly. A sigh of relief followed. Then the Professor looked into the late would be teacher's astonished face and woke up with a gasp. The ridiculousness of the situation appealed simultaneously to them both, and they began to laugh. It was a bond of sympathy between them and the new examination began under the most friendly auspices. The little teacher went back to the file of brothers and sisters radiant.

"I've got it! I've got it!" she cried, hugging them one by one in turn.

The Professor went home feeling a little rested. Pavonia studied his face earnestly from the kitchen window. The cloud of anxiety over her own homely face lifted as she looked.

"He looks easier in his mind," thought Pavonia. "And the dear land knows he needed to! I couldn't have stood it much longer, and I told John Peter so. I told John Peter so last night."

Pavonia sighed. She was remembering John Peter's face when she told him "so." The memory of it disturbed her.

"Poor John Peter!" Pavonia murmured. "And poor Professor, too—for the dear land's sake, yes! He's a-passin' through deep waters, the Professor is!"

The next day the deep waters closed over him again. He began to feel an overweening desire to fall in with Pavonia's John Peter—the Professor called him Simon Peter—and to shake him with all the fervor of his mood and the strength of his big muscles. Pavonia thought she read the desire in his gloomy face and so warned John Peter at the first opportunity.

"He ain't safe to meet just now, John Peter," she said; "he'd rather give you a good trouncin' than not, the Professor would, and I don't feel to blame him any."

The summer days put on autumn airs after a little. A girl was at length engaged to take Pavonia's place, and John Peter's star rose into ascendancy. In like ratio the Professor's set. For the new girl was a thorn in the flesh that the Professor plucked out soon, in sheer distress. Another and another "thorn" succeeded her, until peace and comfort were so long-absent things in the Professor's daily existence that he could scarcely remember them at all. There was no more peace down-stairs. Up-stairs in The Little Woman's room it still lingered as if loth to leave, but its presence was bought by the Professor's heroic struggles.

One day when the first snow was frosting the world thinly the Professor and Pavonia met down town. Pavonia was brisk and happy. The Professor was thin and grave.

"Well?" said Pavonia.

"Well?" echoed the Professor.

"Who's there now?"

The Professor smiled patiently.

"A woman—certainly, certainly," he said. "She has been there three weeks. She cannot cook, but she—er—means well. She has five little children."

Pavonia stared into his face, grim and waiting.

"Do the little children run in and out to see her jest when they want to?" she demanded, sharply.

"Er—run in and out? No, certainly. Not out. They run in—I think they are perpetually running."

"What say?" gasped Pavonia.

The Professor was still smiling patiently.

"They stay there all the time; there are five of them," he said.

"The Lord help us!" breathed Pavonia.

"John Peter," she said that evening, over their cozy supper, "I've got something on my mind."

John Peter had just done justice to one of Pavonia's choicest meals and was in the best spirits. It was as Pavonia had reckoned upon. He went round the little table and took Pavonia in his arms.

"Let me heft it an' calc'late if it's any account," he laughed.

Pavonia smoothed his rough cheek with her rough fingers.

"John Peter, I'm going back!"

"Eh? Goin' where, Pavonia?"

"Back. I'm goin'. I can't stand it any longer. There's a woman and five children takin' care of the Professor and the Professoress. I can't stand that. I'm going, John Peter, and you can go, too, if you want to. You can do jest as the American eagle would."

There was absolute quiet in the shiny little kitchen a moment, save for the subdued sounds when John Peter swallowed hard.

"But, John Peter—"

"What say, Pavonia?"

Pavonia crept up closer.

"But I guess the American eagle would go along, too, John Peter, don't you?"

"You bet he would—all flyin'!" cried John Peter, in his great hearty voice.

So it was that after many tempests the "deep waters" subsided and there was the old peace again in the Professor's soul.

WAKING DREAMS

Between mine eyelids and mine eyes,
Like red and satin poppy-leaves,
Lie soft the dreams of Paradise.
They linger when my spirit grieves;
They quench the fever in my brain.
And kiss my hopes to life again,
Between mine eyelids and mine eyes.

Between mine eyelids and mine eyes,
Like star-beams melting into peace,
Drift on the visions out of skies
Wherein eternal years increase;
I lose my anchorage to earth,
And feel the light of second birth
Between mine eyelids and mine eyes.

Between mine eyelids and mine eyes,
With love's bright mystery and grace,
My precious friends without disguise,
With benedictions in each face,
Walk slowly midst the trees and flowers,
Or sleep within the garden bowers—
Between mine eyelids and mine eyes.

Between mine eyelids and mine eyes
A wandering spirit sweet as sleep
Comes singing where the daylight dies;
And tuneful fountains of tears aleap
Begem the path her footsteps trod;
In hers my dim-eyed soul saw God,
Between mine eyelids and mine eyes.

Between mine eyelids and mine eyes,
I live and conquer, see and know.
Oh, let my spirit on this wise
Along the trackless confines go!
No other universe so sweet
As this—forever bright, complete—
Between mine eyelids and mine eyes.

—Rev. Frank W. Gunsaulus, in Saturday Evening Herald.

STATISTICS OF MARRIAGE

The United States government has published a chart of unmarried men and women. It is a map, printed in colors, and shows at a glance in what localities bachelors are thickest, and in what regions spinsters are most dense to each square mile. The subject is worked out in this graphic fashion to such a fine point that any unappropriated person of either sex may learn in a moment exactly the matrimonial expectation, reckoned on a percentage basis, which he or she will secure by changing residence to any given spot in the United States.

In Massachusetts, for example, there are at the present time 224,368 bachelors of twenty years and upward, while the number of spinsters in that state is 218,070. Between the ages of twenty and twenty-four there are 97,816 bachelors, and 90,749 maidens. Between twenty-five and twenty-nine there are 55,640 bachelors and 48,269 spinsters. Between thirty and thirty-four there are 28,033 bachelors and 25,456 spinsters. Between thirty-four and forty-four there are 24,811 bachelors and 26,490 maidens. Between forty-five and fifty-four there are 10,197 bachelors and 13,943 spinsters. Between fifty-five and sixty-four there are 4,504 bachelors and 7,409 maidens. From sixty-five years upward there are 3,167 bachelors and 5,774 spinsters. The bachelors in Massachusetts outnumber the unmarried women by two tenths of one per cent.

People generally have been greatly mistaken in their notion that there is an enormous surplus of unmarried women in this country. No such excess of spinsters exists; in fact, it is quite the other way, the bachelors outnumbering the maidens. At the present moment there are in the United States 2,200,000 more unattached males than females similarly situated, the exact figures being 5,427,767 bachelors against 3,224,494 spinsters, of ages from twenty years up. Thus, if girls do not find husbands, it is not for lack of a plentiful supply. What is required seemingly is a migration of spinsters from the North and East to the great and growing West, in parts of which there are ten available mates for every maid.

It must not be inferred, however, that there is actually an excess of unmarried women in the northern and eastern states. Even in those parts of the country there are more bachelors than spinsters twenty years old and upward. No state in the Union has as many maidens as bachelors—not even Massachusetts, where the figures are 219,255 spinsters against 226,085 bachelors. Massachusetts is the banner state for spinsters, the bachelors outnumbering them by only two tenths of one per cent. In Rhode Island the excess of bachelors is two per cent. The excess of bachelors in the District of Columbia is eight per cent, in North Carolina nine per cent, in New Hampshire nine per cent, in Connecticut twenty per cent, in Maine thirty-seven per cent, and in Vermont fifty-four per cent. In Maryland the bachelor surplus is nineteen per cent, in New Jersey it is twenty-two per cent, in New York it is twenty-six per cent and in Virginia it is twenty-two per cent. All of these are low-percentage states, so far as the superiority of bachelors in point of numbers is concerned.

A glance at the marriage chart shows some surprising facts about surplus bachelors in some parts of the country. Idaho takes the lead as a desirable place of residence for women who want husbands, that state having one thousand per cent more bachelors than spinsters. The exact figures are 16,584 single men against 1,420 single women twenty years old and upward. Wyoming is a close second, with an excess of nine hundred and ninety-three per cent, the figures being 16,183 bachelors against 1,487 maidens. Arizona is next, with a surplus of nine hundred and thirty-one per cent, the figures being 13,649 against 1,326. Washington has an excess of seven hundred and seventy-seven per cent in bachelors, the figures being 80,537 against 9,181. Nevada is a good fifth, with a surplus of six hundred and seventy-eight per cent of unattached males, the figures being 12,175 against 1,627. It will be understood that no widowers are included in any of these statements, nor yet any divorced people. All of both sexes below twenty years are left out.

With these figures in hand it ought not to be hard for the average lonely spinster to secure a husband. She does not need many charms to secure a mate in a region like Idaho or Wyoming, where there are ten bachelors for every available maiden. A premium of one thousand per cent is a practical assurance of matrimony. Other places where the excess of unmarried men is large are California with three hundred and seven per cent, Colorado with four hundred and eighteen per cent, Florida with one hundred and twenty-two per cent, Kansas with one hundred and fifty-eight per cent, Michigan with one hundred and eleven per cent, Minnesota with one hundred and forty-eight per cent, Missouri with ninety-six per cent, Nebraska with two hundred and fourteen per cent, New Mexico with two hundred and ninety per cent, North Dakota with two hundred and ninety-four per cent, Oklahoma with four hundred and eighty-five per cent, South Dakota with two hundred and eighty-two per cent, Texas with two hundred and four per cent, Utah with two hundred and seventy-five per cent, Montana with seven hundred and nine per cent, and Oregon with four hundred and twelve per cent.

It will appear to the casual reader at the first glance that these figures are very extraordinary. They make it seem as if the total number of males in the country was enormously greater than the total number of females. But it must be remembered that the mass of the population in each state is paired off by marriage evenly as between the sexes, leaving only a comparatively small fraction of single persons of marriageable age. Only this fraction is considered in the present statement and in most states the male part of the fraction is much in excess of the female part, and hence the great percentages of bachelor surplus quoted. In the whole of the country there are 5,427,767 bachelors against 3,224,494 spinsters; an excess of sixty-eight per cent of bachelors over the unmarried women.

ORIGIN OF THE TERM "MISS"

"Miss" is commonly assumed to be an abbreviation of "mistress"—and this may be true; but it was not a corruption, nor a form unconsciously introduced. John Evelyn has left a record of the date and circumstances. In 1662 he goes to see the "fair and famous comedian call'd Roxalana, from the part she performed," and learns that she has "been taken for the Erle of Oxford's misse, as at that time they began to call lewd women." In 1666 he speaks of "fowle and undecent women who became misses and sometimes wives of the young gallants." Again Evelyn witnessed a drunken entertainment in 1671, when the king attended with a "misse, as they call those unhappy creatures." Never did word undergo a stranger revolution! It would have been the deadliest of insults to call a round lady "Miss" at that time. But here is a very strong illustration of the rule that terms really wanted will gain a place in the language, be the objections what they may. Hitherto there had been no distinguishing title for young girls, saving those ranks of life where "Mademoiselle"—more commonly "Demoiselle"—was current. Elsewhere a married woman and her daughter had "mistress" in common. We do not recall any allusions to the inconvenience which must have followed, but the eagerness with which "Miss" was accepted, in spite of the gravest disadvantages, is the best proof that it was felt. An attempt had been made apparently to naturalize "madam" as the title of a married woman, thus freeing "mistress" for the use of girls exclusively. But it never succeeded with the middle class, and it had become old-fashioned in the time of the Stuarts; nevertheless, some of us can recollect old villagers speaking of the great lady of the neighborhood, in the days of their youth, as "Madam So-and-So." But there was little help there, and the embarrassment must have grown continually as social intercourse became more general. It is not extravagant to suppose that the custom of designating a man's wife as his "lady" was an effort to escape it. One must turn half a hundred pages of Evelyn's diary to find the name of a married woman, unless she has a title of nobility—always it is "his lady." But in the upper circles "Miss" won its way slowly. We may venture to say that it does not occur in Lady Mary Stuart Wotley's correspondence, nor does "Madam," applied to an Englishwoman. Little girls and their grandmothers are "Mrs." alike. It is to be observed, however, that Pope uses "Miss" freely in the same era. Lady Mary and others of her rank may probably have learned the shameful origin of the word in youth and eschewed it on that account, whilst Pope would never hear the story unless by chance. Steele, in the "Guardian," addressed a girl of fifteen as "Mrs.," and Lady Bute left it on record that she, born in 1718, remembered some old ladies who always called her "Mrs." in the nursery. Under such circumstances it is no wonder that "Miss" triumphed over its evil associations. A word was never so badly wanted for the convenience of life and the purposes of civilized society.—London Speaker.

EARN THEIR BREAD

Four million women in the United States earn their own bread. They have invaded all occupations, and one third of all persons engaged in professional service are women.

Feminine teachers and professors number over one quarter of a million, exclusive of teachers of music, who are 34,519 strong, and 10,000 artists and teachers of art.

There are 1,143 women clergymen.

Journalists number 888, with 2,725 authors and literary persons.

Of chemists, assayers and metallurgists there are two score lacking one.

Lawyers who are not men are 208.

Feminine detectives are 279 in number.

Nineteen women brave the dangers of wilds and forests as trappers and guides.

Only two women have been discovered who are veterinary surgeons.

In Texas, a woman has the contract for carrying the mail from Kiffe to Seirnal Hall.

Georgia has a woman mail-carrier; she travels a forty-mile route tri-weekly. This young woman also manages a farm.

The Chamber of Commerce, Cincinnati, has the best restaurant in town; it is run by three Scotch women, and they clear about $15,000 yearly, although their annual rental is $5,000.

In New Orleans one of the finest orchestras is composed entirely of women.

In Astoria, Long Island, many of the largest hothouses are managed by women.

In New York a blacksmith's shop is managed by three young women.

All the salted almonds sold by one of New York's largest groceries are prepared by a woman, who is conducting a profitable business thereby.

A fact foundry—or an agency for supplying facts upon any subject at a short notice—is the industry of two Chicago damsels.

Packing trunks is a St. Louis woman's industry.

The most flourishing conservatory and rose garden, in Elmira, New York, is owned and managed by a woman.

At the Young Men's Christian Association, Philadelphia, two young women are in charge of the elevator.

Women writ-servers are employed with great success.

Buffalo boasts a woman contractor who is also a quarry owner; she is the only feminine member of the building exchange.

A Jersey City woman makes her living by painting signs.

The woman manager of a California insurance company is credited with the largest salary paid to any woman—$10,000 a year.

As agents for selling law books women occupy almost the entire field.

The most successful ranch owner in Kansas is a woman, not over thirty-five years of age. There is a proverb to the effect that in Kansas there is no interest, no profession, no trade and no deal without a woman in it.

In Boston are two large advertising agencies, the members of both firms being women and all their employees women.

In a New England factory women are employed as piano-makers.

As switchmen women are employed by several western railroads.

Upholstering is a trade women are learning.

A Louisiana woman supports herself by raising mint.

Writing love-letters at so much a letter is one way of earning a livelihood.

Cousulting fashion expert is a St. Louis woman's occupation.

One of the largest flower-importing establishments in New York is managed by a woman.

The largest typewriting business in the world is in New York and conducted by two sisters.

An entire block of houses in New York was papered by a young woman, who takes the contract for such orders from large builders.

One young woman in Gotham is employed as a prescription-clerk in a drug-store.

About three hundred girls are employed in the harness trade in New York.

HOW OLD GLORY IS MADE

Since that day when Paul Jones first unfurled the newly established stars and stripes on the Ranger, Old Glory has passed through many changes. Since that time, too, the number of our national flags has somewhat increased, so that now, as a rule, even the most patriotic citizen of this republic has a very vague idea of the number of stars and stripes that are floating in different parts of the world. All these flags have to be duly made—another fact which the ordinary citizen does not often take the trouble to remember.

The astounding number of national emblems used in our navy, in the merchant service, on government and municipal buildings, and also in less official capacities, renders the manufacture of Old Glory and her attendant emblems in hunting a very important industry.

Another branch of the flag business by no means insignificant is the repairing and patching of government flags. This work has to be done by expert hands, and the greatest care has to be exercised in its performance. In Brooklyn, for instance, there is an establishment entirely devoted to the repairing of naval flags and pendants.

The mere landlubber has no idea of the number of flags in use in the American navy. Every vessel going into commission finds it necessary to draw the complete outfit, which includes, besides the national flag, the various ensigns' and admirals' flags, some half-dozen sets of signal-flags in different sizes, each set with several dozen different pendants, and a selection of colors representing different foreign nationalities.

The orders for new flags come into the department at odd times and in varying quantities, but come they always do, for it must be remembered that the life of the ordinary signal-flag does not average more than six months. A flag-ship carries some 600 signal-flags altogether, so it will be seen that the preparation of these pieces of bunting is no trifling thing.

The material generally used for the manufacture of these very necessary trifles is worsted bunting. This bunting is specially dyed for the purpose, and made of such strength that it will stand the test of a specified strain. After the different patterns are cut as desired they are fitted in a specially constructed machine which, by an ingenious arrangement, imposes a haulage test of almost 100 pounds on the fabric. If the material does not tear under this test it is handed over to the sewers and made into the regulation patterns and combinations. The colors chiefly used are red, white, navy blue and yellow. Sometimes instead of using bunting duck is employed, especially for the back edge or "heading," to which the line, by means of which the flag is drawn up, is attached.

For their guidance while employed in making our naval flags the different persons at work are supplied with the government's official flag-book, in which several hundreds of different flags are displayed in their correct dimensions and colorings. It is not mere caprice that governs the size which a flag shall be made, this being laid down with the utmost precision by the officials at Washington. Each grade of size has a particular significance, and is regulated by the proper officials.

Some of the pendants and streamers are made of extraordinary length, the longest ranging from 60 to 300 feet. When the Buffalo, for instance, was homeward bound from Manila she flew a pendant 288 feet in length.

It sometimes happens that a country has found it expedient to change its flag, and this means that all the flags of such a country in use on our ships have to be remodeled as well. Each of our navy-yards has its flag-loft where this work is carried on, the sewing being done by women. These women work under the supervision of experts. Every woman has a sewing-machine, and on this does a remarkable amount of sewing each day.—The Atlanta Constitution.

HOLES THAT LIGHTNING MAKES

"Did you ever see the diameter of a lightning flash measured?" asked a geologist of a writer in "Pearson's Weekly." "Well, here is the case which once inclosed a flash of lightning, fitting it exactly, so that you can see just how big it was. This is called a 'fulgurite' or 'lightning hole,' and the material it is made of is glass. I will tell you how it was manufactured, though it only took a fraction of a second to turn it out.

"When a bolt of lightning strikes a bed of sand it plunges downward into the sand for a distance less or greater, transforming simultaneously into glass the silica in the material through which it passes. Thus, by its great heat it forms a glass tube of precisely its own size. Now and then such a tube, known as 'fulgurites,' is found and dug up. Fulgurites have been followed into the sand by excavation for nearly thirty feet. They vary in interior diameter from the size of a quill to three inches or more, according to the 'bore' of the flash.

"But fulgurites are not alone produced in sand. They are found also in solid rock, though very naturally of slight depth, and frequently existing merely as a thin, glassy coating on the surface. Such fulgurites occur in astonishing abundance on the summit of Little Ararat, in Armenia. The rock is soft and so porous that blocks a foot long can be obtained and perforated in all directions by little tubes filled with bottle-green glass formed from the fused rock. There is a small specimen in the national museum which has the appearance of having been bored by the teredo, and the holes made by the worm subsequently filled with glass.

"Some wonderful fulgurites were found by Humboldt on the high Nevada de Toluca, in Mexico. Masses of the rock were covered with a thin layer of green glass. Its peculiar shimmer in the sun led Humboldt to ascend the precipitous peak at the risk of his life."

THE EDUCATIONAL VALUE OF TRAVEL

Up to the present time travel has been in our minds such a thing of education, so broadening and humanizing in its possibilities, that recreation has been lost sight of; but now that the educational atmosphere of city life presses so powerfully in every direction, with classes and lectures upon every known subject "illustrated by stereopticon views," travel may assume other phases even to the serious-minded. Many persons have curious ideas in regard to travel and what it will do for one. A mother with more money than brains said, "There is no need of my daughter studying geography; when she is older we shall travel!" It is very likely the mother was the one who complained of her visit in Venice being spoiled by the high water, and the daughter may have been the young lady who, on a journey on the Rhine, hearing an acquaintance speak several times of visiting Mayence, asked, "Why do you always say 'my aunt's?' Is your uncle dead?"

But more important things are learned in traveling than geography, and it is amazing how a little journeying in the world develops character. People amiable at home need only a few days to display phases of temperament utterly unsuspected by nearest relatives, and other natures cold and reserved seem to mellow into sweetness in the chances daily given for unselfish and thoughtful acts. Disraeli says, "By all means travel with your friend if you want to lose him." Addison and the poet Gray both found it a dangerous experiment, the latter left his companion at Mantua before half the journey was completed, owing to a quarrel over the pronunciation of an Italian word. Punch, with a grain of truth in the satire, makes one tourist ask another if he is traveling for pleasure or with his wife! Surely no one would hold as one of the least of the educational values of travel the constant opportunities it gives for the cultivation of patience, the charity that suffers long and is kind, the speaking no ill of his neighbors on shipboard and table d'hote. No one but the person who has never traveled with "the family," or with a friend who is always behind time, or one who is always ahead of time and prides herself that she never kept any one waiting for her, or with a small boy, or some one who always forgets his bag or the kodak or the tickets, can appreciate what traveling can do in development of character. Then, too, the rain falls on the just and the unjust, the traveled and untraveled, but only the experienced can realize what it means in self-repression to have the Rhigi lost for days in the fog, no blue sky in Florence when all one's life there have been dreams of sunny Italy, freezing cold in Egypt when tradition says it is the most delightful of winter resorts. When fires won't burn and the only person able to keep warm is the one working the bellows, when candles are few and dear, coffee undrinkable, and a twelve-course table d'hote dinner leaves appetites unsatisfied, when baggage gets lost and cabbies can't understand their own mother-tongue, the traveler comes in contact with influences that give him a broader view of life.

It is not necessary to dwell upon these points in the educational value of travel lest the whole population, in its thirst after moral development, pack its trunk and start a-touring, for man is by nature a migrating animal. Some one says that "the tourist is the modern nomad; with the savage traveling was a necessity, but with the civilized man it is his greatest luxury." He starts from home with many impulses, usually a love of change, for that seems to be in the blood nowadays. One person starts out to see the big trees of California, the gold of the Klondike, another to cross a glacier or ride in a gondola or in a jinrikisha, another wishes to see the Colosseum by moonlight, another to climb to the top of the pyramids and every steeple and tower in Europe. One little old lady from Texas made the long journey to Paris and said her desire in visiting Europe was satisfied by sitting five minutes on Napoleon's throne at Fontainbleau while the custodian's back was turned. And a young man from Indiana said he went abroad to do something no one else had done, so he said, "I have swum in every big river of Europe; the Thames, the Seine, the Danube and the Tiber." When asked if he had crossed the Rubicon, he replied, "Mountains weren't much in his line." Such travelers amuse themselves and others, but naturally they bring little back but the desire for new experiences, and the educational value of travel is really summed up in Goethe's expression, "We bring from Italy what we take there," or as Doctor Johnson puts it, "He who from travel would bring knowledge, must take knowledge with him."

Shakespeare tells us, "He that wants money, means and content, is without three good friends;" meaning, of course, in our long journey from the cradle; but in briefer trips the same holds good, though neither money nor friends can give us the power to enjoy and appreciate what travel brings.

Money is only of value so far as it goes; scenery is as fine from the third-class railway-carriage as from the first, and he who has no love of Nature in his heart cannot hope to gain it through fine upholstery. If Shakespeare means nothing by one's fireside what need to go to Stratford; if Giotto and Michael Angelo and Dante are abstractions Florence will have a briefer story to tell. Cæsar becomes a reality to the student after the Forum and Palatine Hill, but what of the Parthenon, Mars Hill, Athens itself, without a knowledge of Phidias, Socrates, St. Paul! And Egypt, how desolate its temples, how dead its mummied Pharoahs without some feeling for the past on the banks of the Nile!

Last winter in Cairo an Englishwoman of the type seen so much in continental hotels, who lives in Bristol, or Norwich, or Winchester, and is not quite certain of the respectability of those living outside of her own privileged city, was overheard saying to her dragoman, "Can you tell me if there is anything in Egypt more than three thousand years old?"

"Oh, yes, madame," replied the guide; "the pyramids were built six thousand years ago."

"Ah, really; then they must have been built at the creation of the world!"

"Oh, no," the guide answered, a little more modern in his dates; "the world was created many thousands of years before that!"

"Ah, really! Was it, indeed!" the Englishwoman exclaimed, and then resumed her crocheting. Now what would Luxor and Karnak and Thebes mean to her?

But necessary as reading is to give travel the value it should have, the ability to observe closely and remember accurately are most important elements in intelligent traveling, a slavish devotion to books makes knowledge an isolated and selfish benefit. The contact with men of all classes and races and conditions awakens our sympathies and breaks down the narrow notions that grow up at home. The broader outlook in the world dissipates our perjudices, and when we have seen how other people live, looked upon their joys and sorrows, we gain a new conception of the unity of the great system under which we live.

Not the least value of travel is the appreciation of home that it gives. "Every traveler has two pleasures; first, the going away, second, the coming home." There are those who are spoiled by travel, but there were some such in Shakespeare's time. Rosalind says: "Farewell, Monsieur Traveler! Look you lisp and wear strange suits, disable all the benefits of your own country, be out of love with your nativity, or I will scarce think you have swam in a gondola!"

The young woman who gains from travel only a contempt for home and a desire to appear other than she is, whose good American speech, for example, is exchanged for an English accent, only has the misfortune to have traveled from home too young, or to have come back with less sense than she took away. He who returns to his native land, after wandering on foreign shores, without a quickening of his pulses can never know one of the keenest pleasures of traveling, for however much the seeing strange people and places and the contemplation of the world's history and art enlarges the intellect, it ought never to contract the heart, and he is to be pitied who cannot say that after all—East, West, hame's best!"—Elizabeth F. Risser, in the Interior.

CHANGING ONE'S NAME IN ENGLAND

The crown has the absolute right to grant or withhold at its pleasure its license and authority for a change of name, and if all one hears be correct, almost as many applications are refused as are granted. Needless to say, the refusals are not the personal refusals of her majesty, but emanate from the home office, through which all petitions pass. Applicants desiring to assume a name under other circumstances must show what the crown can consider to be good and sufficient reason why the change should be effected.

An application to assume a name where no descent can be shown from any family of such name, and when it is a mere matter of personal caprice, is almost invariably refused. An application to assume the name of a family from whom descent in the female line exists is generally granted if it can be shown that the female ancestor of that name through whom descent is proved was an heraldic heiress in blood, or where the applicant can show that he is an heir of line of any male of that family. An application put forward in a case of adoption to assume the name of the guardian is usually granted if the application is made by the guardian and in his lifetime, but the matter is on an entirely different footing if the application is made merely at the caprice of the ward, and after the death of the guardian, when the latter has left behind him no indication of his wish that his ward should adopt his name. An application to assume the particle "De" in front of a name is usually granted where unquestionable evidence can be produced of descent from some ancestor who so wrote his name.

The application of a husband to assume his wife's name is usually governed by the fact of the heirship or otherwise of the wife. If she be an heiress in blood the application is usually granted, but it is not infrequently refused in cases to the contrary. But the crown does not sanction the assumption of a name by the wife while her husband is alive, unless the husband joins in the petition to assume the same name.

THE HORSE OF THE FUTURE

For the future the automobile holds out the promise of a city practically free from the maddening street noises that make modern urban existence more or less a torture. Cobble pavements are laid to resist metal tires and the pounding of steel-shod horses. With every vehicle motor-driven, and every wheel pneumatic-tired, all pavements can be of asphalt. Not only will the rumbling of heavy trucks and the clatter of hoof-beats disappear, but there will be no more tracks to cut up the streets, since electric omnibuses, carrying as many people and moving as swiftly as the electric-cars of to-day, will take the place of street railways. Having already conquered the rail, electricity will then have made itself master of the highway as well. Rapid transit for long distances being supplied by electric trains in clean, cool, brilliantly lighted subways, the elevated roads will be no more. The removal of the horse from the streets will not only make them noiseless, but will practically solve the problem of street-cleaning, and greatly improve the sanitary conditions of urban life, reducing the amount of street refuse to a minimum. With clean, smooth thoroughfares, through which swift, air-shod, easy-riding vehicles dart noislessly, it will no longer be necessary to seek the country for rest and quiet.

Once the horseless age is in full sway every man will have his own automobile, and the bicycle, which has already, to some extent, supplanted the horse, will in turn be shelved, save for the purposes of sport. With the universal development of sources of supply of electricity the electromobile will take the place of all other forms of traction, and plugs will be provided in the streets from which the automobilist may take his supply of power by a nickel-in-the-slot device, while along rural highways power stations will be established so that journeys of any distance may be undertaken. Even on the farm autowains will do the heavy-burden carrying. The horse may still be harnessed to the plow or any other farm implement, may still furnish sport on the race-course for those people who enjoy this sport, and for riding exercise for the few, but no longer will he be the chief bearer of man's burdens. Who will say he has not earned his rest?—Thaddeus Horton, in Collier's Weekly.

GROWTH OF SUNDAY-SCHOOLS

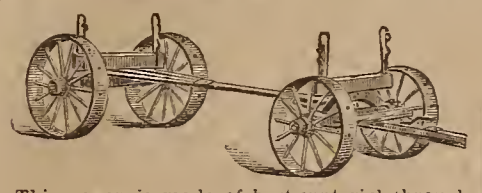
The convention at Atlanta of the ninth international and fourteenth national Sunday-school convention invites attention to the wonderful growth of the Sunday-school, which as a Christianizer and educational force has accomplished a work of inestimable value. It will be interesting to nearly everybody to note some facts showing the progress that has been made in this department of religious instruction.

The enduring foundations of the Sunday-school were laid in Gloucester, England, in 1780, and four years later the first school was opened in London, though in the meanwhile schools had been established in other parts of England. In nine years the number of Sunday-school scholars in the British isles was 300,000. The first school in the United States was established in New Jersey in 1786. The statistics show that in 1851 there were about 2,400,000 pupils in Sunday-schools in England, 300,000 in Scotland, 275,000 in Ireland, and 3,000,000 in America. By 1880 the United States had 6,800,000 Sunday-school scholars and 932,000 teachers. At that time the number of Sunday-school scholars in the world was 12,000,000. The statistics for 1890 show 704,000 teachers and 6,695,000 scholars in the United Kingdom, and 1,100,000 teachers and 8,345,000 pupils in the United States. Canada had 57,000 teachers and 490,000 pupils. The totals for the world were 1,996,000 teachers and 17,720,000 pupils. It is estimated that at present the number of Sunday-school teachers in the world is not less than 2,500,000 and the number of scholars 22,000,000.

These figures are certainly impressive. They show what a vast army is actively employed in religious work, and while they suggest how much greater number in the civilized world are not in the Sunday-schools, the progress shown holds out a most encouraging promise for the future. A world's congress of Sunday-schools is to be held in London next year, which will probably give a fresh impetus to this branch of religious work.—Omaha Bee.

A LOW WAGON AT A LOW PRICE

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Co., Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, that is only 25 inches high, fitted with 24 and 30 inch wheels with 4-inch tire.



This wagon is made of best material throughout, and really costs but a trifle more than a set of new wheels and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

ADULTERATION OF FOODS

WHEN we are told positively by the chief chemist of the United States Department of Agriculture that fully ninety per cent of the articles of food and drink manufactured in this country are frauds, the wonder is that we as housewives pay so little attention to the fact, and purchase so indiscriminately and carelessly of the food products that we find upon the shelves and counters.

The demands for a cheaper rate have brought us a correspondingly cheaper grade of goods. We accept and use them, thereby ruining the digestion of our families and the general health of all. Alarming indeed have been some of the disclosures of adulteration of food made by the senatorial pure-food investigating committee—facts that none can dispute, and that should be brought home to every hearthstone, studied and heeded. Great is the ignorance of housewives as a class, I fear, concerning those things of so great importance—the things we eat. Fatal mistakes are made every day. By slow degrees the individual constitution is undermined and broken down through daily taking into the system, in the foods purchased and prepared, adulterous compounds used in the manufacture of foods and food materials. It is high time that every woman who is the keeper of a home should open her eyes to the dangers about her, and guard well the manner of food products that find their way into her larder and kitchen. If housewives could be made to realize these dangers to the health, and consequently the happiness, of their families, it is safe to predict that more would be accomplished toward lessening the manufacture of adulterated products than by any other method.

In no other line, I believe, do women make so great mistakes in these departments of their households as in the purchasing of flour and baking-powders. Unscrupulous manufacturers of baking-powder, realizing the weakness of women, to lure them on to heavy purchases of baking-powder have offered "premiums" that of themselves should have been warning sufficient to one who stops to think that there must be something wrong somewhere. No one can afford to sell to you or I fifty cents' worth of good baking-powder and then "throw in" an article worth the same or a greater amount of money. No matter that "they" tell you this is their way of advertising their goods. Beware! Death lurks in the compound, though it may be ever so slow in its work. Dyspeptics without end are suffering to-day from the direct effects of food partaken in which these same cheap and death-dealing compounds found entrance, through a mistaken sense of economy of the housewife who purchased them.

Baking-powder is found in every home to-day, of high or low degree. Seldom do people of unlimited means buy other than the best and purest of brands obtainable. Thus they escape the after-effects of poisonous powders. But the families that must "count the cost" have accepted the cheaper brands, feeling that they were securing bargains in receiving the pound of powder and a premium for their money; when in reality they have paid for the premium in full, with cash, and have been led into taking into the stomach an article that in time will react in dangerous form. We are told that of the one million pounds of baking-powder annually consumed in North America a very large per cent of it contains alum. High medical authority tells us that alum is so powerful an astringent as to "produce astriction of the tissues and fibers, contraction of the capillaries and diminution of secretion, thus producing constipation."

I am personally acquainted with cases of dyspepsia that were once acute and simply dreadful, but that have been materially aided and lessened through proper treatment and careful diet, that are directly traceable to the consumption of adulterated, harmful baking-powder, purchased by a number of housekeepers who did not in the least understand the situation. Time and experience and study of the question brought to light some very valuable though dearly bought information. And those wives and housewives can never say enough to their acquaintances upon the subject of adulterated foods, and especially of cheap baking-powders. Another brand or brands of baking-powder are so thoroughly impregnated with ammonia, an equally harmful and dangerous component part of food stuffs, as to have brought it very seriously before the health authorities. Decided measures have been taken to reach with effective means the manufacturing and selling of these dangerous, health-destroying compounds. The enactment of pure-food laws have done and are doing much to lessen the wholesale dispensing or distributing of adulterated foods of all kinds, and principally among them the many makes of cheap, inferior and positively dangerous brands of baking-powder.

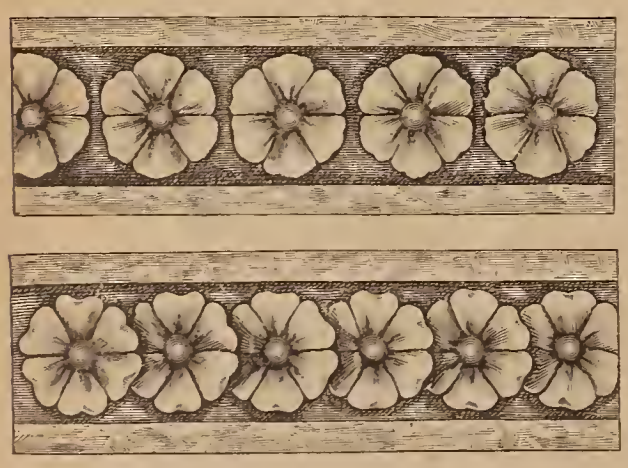
When in the United States we have secured the passage of such a law as has passed into effect and long been resorted to in France we shall have a different condition of affairs as regards the wholesale destruction of good health because of fraudulent and deleterious foods that are taken, and in most instances unknowingly, into the human stomach. The law of France referred to provides that any one who has purchased an article of food from any salesman may take it to the municipal laboratory for the purpose of having it analyzed. If found to be adulterated the law takes the matter in hand and deals with the salesman who has kept and sold adulterated foods. And for a whole year said salesman or tradesman must endure to have and to see in his window a conspicuous display card containing the words, "Convicted of adulteration." Naturally his trade is not brisk after thus convicted, and he will never care to repeat the offense.

If such was the law of the United States, and said law was put into quick execution, I wonder if the window of a single tradesman in the whole country would escape the placard! I doubt it. The list of proven adulterated foods has grown so long that it is a matter of much conjecture whether under the sun there is anything that can be purchased for food that may be relied upon as strictly pure. The farmer is sure of such products as come directly from his farm—his meat, vegetables, milk, cream and butter—for they pass through no other hands than those of home folk before consumed. But he is never sure of his flour and his bread, for before his wheat has been converted into flour the miller has had a hand in the product, and his meed of toll has been made to count in his favor. But of millers there is here and there an honest one, no doubt. I have met one who could not be bribed, coaxed or driven to adulterate the flour with alum, of which the proprietor of the mill had barrels on hand for that purpose when said miller took charge.

And this is another of the crying needs for reform—the adulteration of flour. The farmer is robbed by a substitute of corn-starch, and the consumer is robbed of strength and health by an overconsumption of corn-starch, where it is the protein, or life-giving elements of the wheat, that the body stands in need of.

In connection with the warning against the use of new and unknown brands of "premium" baking-powder (there are a few brands with which no premium is offered, and that are of recognized value and purity) we would offer a receipt for the home-making of a baking-powder that is always good, and that is composed of harmless ingredients; at least I have had the word of several druggists to that effect, and we have for some years used it, finding the cooking into which it enters wholesome and good: Eight ounces of bicarbonate of soda, seven ounces of tartaric acid (or best cream of tartar) and one pint of flour. In other words, purchase from your grocer, at seven cents a pound, a common package of baking-soda, and to this pound of soda add fourteen ounces of the acid or cream of tartar and two pints of flour. Mix thoroughly by stirring with the hand or a large spoon, then repeatedly sift, and put away in cans of tin or glass, away from the air. It costs less than good powders in pound or half-pound cans, is equally as good or better, and you always have a knowledge before you of what you are using.

ELLA HOUGHTON.



WOOD-CARVING

Considerable work may be done without using the mallet, but it becomes necessary when you begin relief-carving. In this the wood is cut away around the design. The entire process has three divisions. The pattern must be stabbed out, the background must be lowered, and finally the design must be modeled. First of all place your pattern on the wood by preparing it on paper and transferring it as described in a former article. Do not select anything more elaborate than a simple band for your initial effort. When your pattern is on the wood take the tool which, holding it vertically, fits best on the outline of your pattern. Do not place the tool exactly on the line, but a little outside. Holding the tool thus with your left hand, hit the end of the tool-handle with your mallet, giving a stroke of sufficient strength to drive the tool into the wood less than one eighth of an inch. Repeat this process until you have gone all around your design. Next you will clear away the wood around your design, using for this purpose your hollow gouge and chisel. Both stabbing out and lowering should be done thoroughly, and the first process should be completed before the second is begun, and the second stage finished before the modeling is commenced. If you are working on an ornamental band you must be careful not to nick the edges. You may lower the background gradually from the edge, or sink it with a right angle, but whichever you decide to do let it be done neatly.

Suppose you are carving a band of rosettes, as illustrated. I suppose after you have finished lowering your background you have before you a row of circular elevations which you wish to model until each resembles a conventionalized blossom. To do this first stab out the little boss in the center of each: then lower the wood around it. With your parting-tool cut the grooves dividing the six petals. Now you will have to graduate the various elevations and shape the edges according to your own taste and talent.

In our best schools very small children are taught modeling in clay. This is a valuable preparation for wood-carving, and if a carver makes his design in clay it will be an excellent pattern for him. The reason is plain. In a pliable material like clay experiments can be tried and corrections made, but the wood once cut can be altered only with trouble and loss of time. If you break off part of your pattern, glue it on and clamp it tight till the glue dries. Then model it as if there had been no breakage.

When your modeling is done the background is generally stamped with a suitable tool. Some carvers use a nail which has been filed into little tooth-like divisions. Some stamps resemble a star. The filed nail is as good as any.

It was Mr. Pitman who insisted on the idea that American wood-carvers should make designs from their native flora, arranging our national foliage and flowers in original patterns. It is worth while to invent a design, even if you merely draw it on paper and never apply it to wood. Compose designs and lay them away till you have forgotten them, then criticize them as if they were the work of some one else.

Some persons finish modeling by rubbing the work with fine sandpaper. Others regard this as an inartistic method.

When the work is done apply raw linseed-oil, putting it on with a small brush. After a few days repeat the oiling and the wood will assume a dark, rich color.

K. K.

SOME GOOD RECEIPTS

ORANGE PIE.—One heaping coffee-cupful of white sugar, one half cupful of butter; beat all to a cream, then add a heaping teaspoonful of flour, the well-beaten yolks of three eggs, the juice of two oranges, and lastly add the whites of three eggs beaten to a stiff froth. When these ingredients are well mixed put the mixture into a dish lined with an under crust, and bake in a moderately heated oven.

RICE GEM-CAKES.—Take one quart of soft boiled rice; to this add a teacupful of flour, a tablespoonful of butter (good measure), a little salt, two well-beaten eggs, one half teaspoonful of soda, one teaspoonful of cream of tartar, or one and one half teaspoonfuls of baking-powder; add enough milk to make a rather thick batter. Bake on a griddle, or pour in well-greased gem-pans.

APPLE MERINGUES.—Pare, slice, stew and sweeten ripe, juicy apples; mash smooth, and season with nutmeg or lemon-peel; line a deep pie-plate with an under crust, fill it nearly to the top with the prepared apples, and bake until the crust is done. Beat the whites of three fresh eggs to a stiff dry froth, then beat in three tablespoonfuls of sugar a little at a time, spread over the pie, and return to a rather cool oven for ten or fifteen minutes. Pie may be eaten either warm or cold. Dried peaches or fruit of any kind may be used in place of apples.

DRIED-APPLE CUSTARD.—Put a quart of boiled custard in a bowl, and have it very cold. Strain a pint of stewed dried apples, flavor with nutmeg, and sweeten. Put this on top of the custard. Beat the whites of two eggs, flavor with lemon, sweeten, and pile on top of the custard.

HENRIETTES FOR TEA.—Take three eggs, beaten separately, three fourths of a cupful of cream or milk, a scant teaspoonful of baking-powder, salt, a pinch of cinnamon (if preferred a tablespoonful of brandy may be added), enough flour to make them just stiff enough to roll out easily. Roll thin as a wafer, cut into about two-inch squares or into diamonds, fry in boiling lard, and sprinkle pulverized sugar over; serve at once.

SWEET-POTATO PIE.—To one pound of baked potatoes, put through a fine sieve, add one half pound of butter, three fourths of a pound of sugar, one pint of milk and six eggs. Flavor with nutmeg, lemon or vanilla. Bake with one crust, and it is delicious.

MRS. J. R. MACKINTOSH.

A SLUMBER-SONG OF THE SEA

Hush, little pet!
Ah! not quite yet
  Thine heavy eyelids close;
For mother spies
In baby's eyes
  Another likeness that she knows.

Hold fast my hand with tight'ning grip,
For just that curve of brow and lip
  I love to see—
The dimpled nestling of thy chin,
The hollow of my hand within,
  Is sweet to me.

  Now cuddle close,
And lend thy cooling undertone
In prayer for father, who alone
The wide seas roams, that thou and I
Mayst snugly housed and sheltered lie.
Dost hear it boom along the beach—
Thy friend and mine—just out of reach?
  We hear its jeweled fingers play—
Friend we so love—friend we so dread,
Who flings us life, but holds our dead
  As hostage—till the Judgment Day.

Over the bright stars of thine eye
No soft-winged little dream-bird flies.
But the stormy petrel's angry scream
Is the note that colors all thy dream:
And the downward sweep of his flashing eye
Makes the heart of the sailor's babe beat high.
No inland-born art thou, my sweet!
No fettered soul in crowded street,
But child of the rocks, the dreary moor,
Of the wild winds rattling at the door:
A favored son of the boisterous sea,
Whose sweetest lullaby is for thee!

So, safely slumber in my arms,
Drowsed by the ocean's wild alarms,
Till father comes, some happy day,
A-sailing, sailing o'er the Bay—
A-sailing, sailing o'er the Bay,
Some happy day,
Some—happy—day!

—Thorn Sessions.

A DOZEN WAYS TO SERVE BANANAS

Bananas are universally used throughout America, and yet thousands of people never heard of using them excepting to serve as a fruit. The following directions will be found pleasing, new and delicious.

Baked.—Place a number of sound, not overripe, bananas on the grate of a moderate oven, and bake twenty minutes. If desirable, split down the skin on one side and sprinkle powdered sugar over, serving at once. People who find them indigestible raw can eat them in this way.

Fried.—Peel six bananas, and slice lengthways. Have some butter hot in a skillet, and lay in the slices; fry brown, and sprinkle cinnamon over them. Serve hot. These are delicious.

For Sauce.—Cut bananas in thin circles into a deep dish one half hour before serving. Use one half cupful of sugar to six bananas, add one half teaspoonful of lemon or vanilla extract and one cupful of sweet cream; stir well into the bananas, and serve cold.

Banana and Pineapple Float.—Slice three bananas into one half canful of shredded or one half canful of finely shaved pineapple. Place in a deep glass dish and cover with the following: Two cupfuls of milk and one cupful of sugar brought to a boil. Stir one heaping tablespoonful of corn-starch into one half cupful of water and the yolks of two eggs; add to the boiling milk. When a little cool, pour over the mixture in the dish, pile the whipped whites on top, and brown slightly in a quick oven. A splendid dessert.

Bridal Cream.—One quart of sweet milk, one grated cocoanut, two cupfuls of sugar; bring to a boil, and thicken with two tablespoonfuls of corn-starch dissolved in milk. Have ready the whites of two eggs heaten stiff, and slowly beat them into the hot cream. Pour over six or eight sliced bananas; when cool, ice the top and sprinkle thickly with cocoanut. The yolks of the eggs should be used to make a gold cake flavored with orange, to serve with cream; keep the cream on ice until ready to serve.

Transparent Flummery.—Soak one half boxful of gelatin in a pint of water for three hours, add the juice of two oranges and one more cupful of water, and bring to a boil with two cupfuls of sugar. Slice two oranges and six bananas in a square dish, and pour the gelatin over them, stirring well. Let it get stiff on ice, and when ready to serve cut off in blocks or hack into chunks, pile on a glass platter and pile whipped cream around it. A beautiful party dish.

Cake.—Two cupfuls of sugar, one half cupful of butter, the yolks of three eggs and one cupful of milk. Cream the sugar and butter, add the eggs and milk, one teaspoonful of lemon extract, two teaspoonfuls of baking-powder sifted into three cupfuls of flour, and beat well. Bake in round pans. Beat the whites of the eggs very stiff, and add one cupful of powdered sugar. Spread each layer with the icing before placing the layers of sliced bananas on. It is much better than when bananas alone are used. This cake should be made the day it is to be eaten. Just before serving ice the top, and place the bananas upon it. They blacken if exposed to the air any length of time.

Banana Pie.—Line a pie-tin with rich puff-paste, and fill level with sliced bananas. Mix one cupful of sugar with the yolks of two eggs and one half cupful of milk or cream. Pour over, and bake in a quick oven. Pile the whipped whites upon it, and brown the top.

Shortcake.—Two cupfuls of flour sifted with one heaping spoonful of baking-powder, one half cupful of butter, and one egg with one half cupful of sugar mixed into it. Stir in milk so it will be just stiff enough to roll out, and bake in a round tin. Split and butter, fill with sliced bananas; serve hot, with plenty of sweetened cream.

Custard.—Four eggs well beaten, with two cupfuls of sugar, two cupfuls of sweet milk, one cupful of cream, one tablespoonful of butter, and five bananas sliced in circles. Bake one half hour, setting the dish in a panful of water.

Banana Puff.—Make a dozen ordinary puffs as for cream puffs. When cool fill with the following: Four bananas mashed fine, with one cupful of sugar, two tablespoonfuls of whipped cream and a spoonful of lemon-juice.

Tarts.—Bake tart-shells, and when ready to serve fill with the above mixture and ice the top. Very good.

Viola Van Order.

POSTAGE-STAMPS A MEANS OF EDUCATION

It was in the year 1891 that many boys and girls read in the newspapers that canceled postage-stamps could be sold at the rate of $100 a million. The papers further stated that the stamps must be done up in neatly assorted packages, each kind and each issue by itself. Very few young people realized what it meant to get a million and carefully prepare them for sale.

Among the many who undertook the task was Wayne Dewitt. He was nearly eleven years old, and was a boy noted for his stick-to-it-iveness. He began by overhauling all the letters in his own house. His mother had a trunk of letters she had saved before the Civil-War time, and Wayne almost immediately became interested in the study of the various kinds of stamps.

He also learned that at first only provisional stamps were issued from various cities, as Baltimore, Providence, St. Louis and New York, at that time at the expense of the postmaster of the office from which the stamps were issued. These began with 1842, and it was not until 1847 that the general government issued stamps to be used in all parts of the country.

The provisional issues made by the local postmasters were very small, and some of the stamps are exceedingly rare. Only two or three specimens are known to exist of the Brattleboro, Vermont, five-cent issue of 1846. Most stamp-collectors have to be satisfied with a photograph of this rare stamp, which can be purchased for ten cents. Not very long ago an English gentleman paid $1,500 for one of the genuine Brattleboro stamps.

Wayne discovered that Washington's likeness was always on the stamp in current use; that is, there is always one stamp called "current." At the present time it is the two-cent stamp. When the ordinary letter-stamp was three cents that one bore Washington's likeness; now the three-cent stamp has Jackson's face on it. The one-cent stamp always bears Franklin's portrait, doubtless because Franklin wrote and said so much about saving the littles—taking care of the pennies and letting the dollars take care of themselves. The one-cent stamp of the Columbian issue has been the only exception to this rule. Besides bearing Franklin's portrait the one-cent stamp is always blue, with the possible exception of the one issue (1869).

The set of stamps now in use form a collection of the portraits, in miniature, of America's great soldiers, statesmen and presidents: One-cent, Franklin; two-cent, Washington; three-cent, Jackson; four-cent, Lincoln; five-cent, Grant; six-cent, Garfield; eight-cent, Sherman; ten-cent, Webster; fifteen-cent, Clay; thirty-cent, Jefferson, and ninety-cent, Perry.

Wayne had many friends among the business men that had known his father, and these gentlemen saved the stamps in their offices, and every Saturday allowed Wayne to go after them. Occasionally a friend would send a box of stamps to him from some distant town, and he had an aunt who had saved her letters in boxes in her attic for a great number of years, intending some day to file them. She had kept them because many contained valuable information from friends traveling in foreign lands. She interested herself for Wayne's sake, and looked over all her letters, and gave him the stamps.

To prepare them was an immense amount of work, and Wayne was a boy that never had leisure out of school, for there were many ways by which he had to help carry on the domestic machinery of his humble home.

There came into his possession many valuable stamps, and he began to prepare an album for himself; then he gathered up quite a number and sent them by mail to a dealer in New York. For these he received two dollars. At another time he sent some choice ones to a firm in Canada and received another two dollars. This was just aside, as he still took care of the mass of stamps he had. But as he grew older and busier there came a lapse in the work, and when he again planned to resume it he made up his mind simply to try to sell what he had and not make any further attempt to obtain the million. He found that should he ever get a million he could not pack them in a barrel, they would take up so much space. The 175,000 that he had filled a large telescope-satchel and a market-basket besides. By having gathered them during and just after the World's Fair he secured a large number of Columbian stamps, and he was finally able to sell them, though not at a very good rate.

Wayne knows now that a boy can earn much more money in other ways than by gathering postage-stamps, but as a means of education he has learned what he could hardly learn in any other way at his age.

"Philately" is a long word, but that study has led Wayne to history, geography, government and to be interested in the nationalities of the world. The knowledge he has gained from studying the stamps as thoroughly as he has far outbalances any money he obtained. Such knowledge can neither be bought nor sold.

Mary Joslyn Smith.

POSSIBILITIES OF CANNED TOMATOES

Tomatoes are a most wholesome vegetable, their acid acting in a salutary manner on stomach and kidneys, and they should be eaten two or three times a week. During the winter and spring fresh tomatoes are so high-priced that few can afford them, but canned ones, if properly cooked, are a very palatable substitute. When a can is opened the contents should immediately be emptied into a dish, for if allowed to stand in the tin after the air reaches them a harmful acid is generated. If set in a cool place tomatoes may be kept in a covered dish for two or three days, so if but a part of a can is needed at one time the remainder may be used later.

Tomato Soup.—Chop a large onion fine, and cook in a pint of boiling water. Drain the liquor from a canful of tomatoes, press tomatoes through a colander, then add them and the liquor to the onions, together with one quart of soup stock, and salt and pepper for seasoning. Cook fifteen minutes, and serve with crackers or small squares of toasted bread.

Tomato Soup, without Stock.—Press one canful of tomatoes through a colander, add a tablespoonful of butter, salt and pepper to taste, a half pint of boiling water, and cook fifteen minutes; add half a salt-spoonful of soda, and when it has done foaming remove the scum and add a quart of very rich sweet milk. When it boils add a tablespoonful of flour smoothed in a little cold milk, stirring constantly to prevent lumps. Boil two minutes, remove from the fire, and serve.

Creamed Tomatoes.—Chop fine a canful of tomatoes, season with salt, pepper, a tablespoonful of sugar and a tablespoonful of butter. Put to heat in a saucepan, and when it has cooked five minutes add a cupful of sweet cream in which has been smoothed a scant tablespoonful of flour. Cook two minutes longer, stirring constantly, and serve at once.

Tomato Toast.—This is a most appetizing dish. Prepare as for creamed tomatoes, and serve by pouring over slices of hot toasted bread. Serve immediately.

Escalloped Tomatoes.—Drain a canful of tomatoes, chop them, place a layer in a baking-dish, season with salt, pepper and butter, add a layer of fine stale bread-crumbs and bits of butter, another layer of well-seasoned tomatoes, and so on until all have been used. To the liquor add a half pint of boiling water or sufficient to moisten the crumbs used, pour it over all, and bake for twenty minutes.

Tomato Hash.—To half a canful of tomatoes add a large cupful of finely minced meat of any kind; season with salt, pepper and a generous lump of butter. Cook fifteen minutes, add a half cupful of cream, and serve hot.

Scrambled Eggs and Tomatoes.—Chop fine a half canful of tomatoes, season with salt, pepper and butter, and cook without water for ten minutes. Break into them six fresh eggs and stir rapidly for two minutes; serve immediately.

Tomato Fritters.—Chop fine a half canful of tomatoes; cook for five minutes, add one fourth of a teaspoonful of soda, salt and a half cupful of sweet milk after having removed from the fire. Then heat in one pint of flour. Drop by spoonfuls into hot fat, fry until crisp and brown, and serve hot.

Tomato Relish.—Select a brand of tomatoes known to be particularly fine. Carefully drain them, arrange in a glass dish and nearly cover with finely chopped onion. Add a dash of salt and pepper, a spoonful of sugar and a half cupful of sharp vinegar. Let stand a few minutes before serving.

Chilli Sauce, or Tomato Catchup.—This may be made from canned tomatoes by following any reliable receipt.

Clara Sensibaugh Everts.

CANNED HENS

I was just a slip of a girl then, and you can hardly imagine my consternation when I saw the minister driving into our door-yard on that hot July morning. Mother was away for a week, just a plain family dinner was comfortably baking in the oven, and we were four miles from market. I put on my sunbonnet and hurried out to the fields after father, and such a chase as we had in that blazing July sun after a fowl. The broilers were none of them to be caught, and it was nearly noon before we landed a fat hen in the kettle. I kept up a good fire and the pot boiled furiously, but the hen happened to be an old one, and the longer it boiled the more it seemed to age, until at two o'clock it was agony to discover that my fowl seemed harder and tougher than when I began cooking it. But dinner had to be served.

My father and the minister were both hungry enough to have eaten brickbats by that time, and I never shall forget the look of patient resignation with which they struggled with that fowl. If father had not kept praising up my housekeeping, and if the minister had not told all manner of funny and ridiculous stories, I certainly should have broken down and cried. Fortunately, there were some good things for dessert, so that our guest did not go home hungry.

From that day's experience I learned a valuable lesson, and now that I have my own house to order, prepare beforehand for such an emergency. In August, when the hens have stopped laying and cockerels are cheap and plentiful, I put up from twelve to fourteen cans. It is no calamity if I do live miles from market and a wagon-load of company drive in just at dinner-time; I can skip down cellar for a canned hen and have a chicken pot-pie on the way in a few moments' time. Best of all, I can meet my friends with the cheer and courage of a housekeeper who is prepared for anything.

F. B. C.

TWO WAYS OF MAKING CURRANT JELLY

I want to tell the household sisters my way of making currant jelly, as it saves much work from the way most people make it. Pick the currants when first ripe, wash, but do not stem them, put a few into a stone jar or other vessel, and mash with a potato-masher. When all are mashed, press out. I use a home-made press. It is a square box without a bottom, strongly made, and bound with strap-iron. Set on a grooved board. Put straw in the bottom, then fill up, and put a block on top that just fits the inside of the box, and use a long pole as a lever. I can press twenty gallons of currants in a few minutes. Strain the juice and put to cook about two inches deep in the kettle and over a very hot fire. Heat one cupful of sugar for two cupfuls of juice, and put in when the juice has boiled about fifteen minutes; boil five minutes more, then put in glasses. If the currants are just right the jelly will be very nice.

Mrs. B. F. Graham.

HOUSE OF TOO MUCH TROUBLE

In the House of Too Much Trouble
  Lived a lonely little boy;
He was eager for a playmate,
  He was hungry for a toy.
But 'twas always too much bother.
  Too much dirt and too much noise,
For the House of Too Much Trouble
  Wasn't meant for little boys.

And sometimes the little fellow
  Left a book upon the floor,
Or forgot and laughed too loudly,
  Or he failed to close the door.
In the House of Too Much Trouble
  Things must be precise and trim—
In a House of Too Much Trouble
  There was little room for him.

He must never scatter playthings,
  He must never romp and play;
Every room must be in order,
  And kept quiet all day.
He had never had companions,
  He had never owned a pet—
In the House of Too Much Trouble
  It is trim and quiet yet.

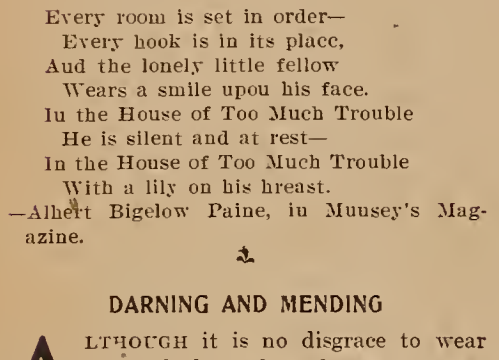
Every room is set in order—
  Every book is in its place,
And the lonely little fellow
  Wears a smile upon his face.
In the House of Too Much Trouble
  He is silent and at rest—
In the House of Too Much Trouble
  With a lily on his breast.

—Albert Bigelow Paine, in Munsey's Magazine.

DARNING AND MENDING

Although it is no disgrace to wear a patched or darned garment, yet it is a disgrace to any woman to do such abominable mending and darning as is often done, and no wonder children rebel and object to wearing a garment clumsily darned or patched with cloth of another color from the garment. If a garment needing mending has faded, then fade the piece with which it is to be mended before using it. If a garment is worth mending, it is worth doing it well.

Do not put on a round patch, and do not set the patch on the outside. Carefully cut out by a thread the worn part, then cut the patch at least an inch larger than the opening it is to fill. Be sure that the patch is fitted in the same way of the cloth, and if the cloth is not plain be careful to have any stripe or pattern exactly match. Lay the patch on the wrong side of the garment and baste it without turning in the edges or letting the stitches show on the right side; then turn the garment over, clip the corners slightly, as shown in the illustration, so that



the edges will turn under smoothly, and hem the edges to the patch, using fine silk or cotton thread and fine stitches set very close together. After the edges are neatly hemmed down, lay a damp cotton cloth over the wrong side, and press it down with a medium hot iron; then remove the damp cloth and press next the wrong side of the garment until it is nearly dry. If the cloth is pressed perfectly dry it will not look so well.

A place that is merely worn thin, but no hole made, is best mended by darning with ravelings of the goods if possible. Thin places in table-cloths and napkins may often be darned in this way and their time of service very much lengthened. Table-cloths generally wear thin first in the folds, as they are always folded in the same place. When they begin to show a little thin on the center folds, an inch or two may be cut off one end and one side, the edges hemmed, and in this way the folds will be changed and the cloth wear longer.

A rent is best mended by darning, where the edges can be brought together. Use no piece under a darn, unless the material to be darned is very thin. An expert darner will make a rent in woolen goods practically invisible by weaving the torn edges together, matching them as closely as possible. Begin a little way back from the edge of the tear and run the needle as far on the other side. If the cloth is thick the needle may be run without any stitches appearing on the right side. Draw the edges closely together, but do not let them overlap. If there is any nap on the cloth brush it back when darning, and then brush it down when through, and it will help to conceal the place. After the darn is finished, press the place on the wrong side in the same way a patch is pressed.

Little girls ought to be taught to mend and darn neatly as a part of their education. In some city schools this is taught as a part of the sewing-lessons. It is true that our country schools are already crowded with a multiplicity of studies, yet one hour a week could well be spent by our girls in learning to sew, to mend and darn neatly.

As a rule, mothers in the country have less time than city mothers to teach little hands the use of the needle. The machine does such quick work that hurried mothers are tempted to make a new garment instead of mending one only a little worn, and unless something is done to remedy the defect neat hand-sewing is in danger of becoming a lost art.

If some woman with leisure would gather the little girls of the neighborhood together once a week and give them lessons in hand-sewing she would be doing true missionary work that would be appreciated by not only the girls themselves, but by the mothers as well.

Maida McL.

A SOURCE OF CONFIDENCE

Have you ever happened to be in a business office when there were boys present making application for some position? If so, you must have noticed the different ways in which the different boys advanced to the manager's desk. Some went boldly forward; some hesitated, shrinking and timid, and had to be called a second time; others stepped up in a manly and confident manner, and still others, who were manly enough, still seemed awkwardly conscious as well.

We all of us have met these four classes of boys—you more particularly, since you have played with them on your "ball team," or met them as members of your "club," or have been schoolmates together, or otherwise have been closely related.

There is the boy who is so conceited and bold that nothing would embarrass him or "phase" him; and there is the lad, poor fellow! who is so nervously shrinking and self-conscious that he can only think painfully of himself. Then there is the boy who is manly and confident, and also the boy who is manly, but so awkwardly conscious.

Now wherein lies the difference between these last two boys. They both seem to have the qualities which make them manly and confident—honesty, intelligence, steadiness, perseverance, kindliness, Christian character—and yet with these qualities one is still so "awkwardly conscious" that it counts against him very frequently; while the other, being self-confident, experiences no difficulty of this kind.

Awkwardly conscious! Of what? Of the fact that his hands and feet are in the way, that his neckwear is not properly adjusted, and that his clothes in general are not just as they should be.

Now I have aroused your sympathy. You are saying to yourself, "Of course we know the fellow. He doesn't dress as well as the rest of us, but that isn't his fault; he cannot afford to."

Ah, but your sympathy is wasted; you are not thinking of the right boy; indeed, the boy you describe is my boy who is manly and confident, without any awkward consciousness about his clothes being less expensive than his friends.

And here comes the rub! It is often the boy who can afford to be immaculate who is not so, but quite the reverse; and it is this boy to whom I have referred.

When he suddenly finds himself among people whose boots are neatly blacked and brushed; whose hands have no appearance of "dead skin" (the school-boy's term for common ordinary dirt); whose nails have very recently seen the nail-file; whose neck linen is virgin white; whose cravats are not all askew, and whose clothes in general are well brushed and well pressed—when this boy awakens to find himself away from the "rest of the fellows" and among people who are careful of their personal appearance, and who notice it and expect it in others, it is at such times that he feels somehow all wrong and wishes he had remembered to be particular before starting out to try for that coveted position in Mr. B.'s office, or before entering Mrs. C.'s parlor, or before encountering the Misses D. and E., and so on and so forth.

I am not going to advocate that "clothes make the man"—far from it; but I am confident of the fact that the appearance of one's clothes, their proper adjustment and the general neatness of a person, have a great deal to do with his confidence in himself, with inspiring confidence in others, and consequently with his success in any enterprise he may undertake.

Try it for yourself some time; "dress up," so to speak, but instead of well-appearing boots put on an old, shabby, dirty, torn pair, with the laces all knotted and broken and hanging, and then try to walk down the street in your usual upright, unconscious fashion. You will not be able to do it; you will try to lose your feet up your trousers-legs or anywhere at all every time you meet any one, and you will feel miserable in general and entirely without your usual confidence.

It is the neat, the scrupulously neat boy, though poor his clothes may be, who will pass muster where the wealthy youth with the careless, untidy appearance will fail.

It takes so little time, after all, to be neat; to give your boots a good shine occasionally or pay the bootblack to do so; to put on fresh linen (without being made to), to tie your cravat properly, and to give your clothes a brisk brushing before you leave your room. It takes so little time to do these things, and yet they go so far toward giving one self-respect, without which no boy can amount to anything.

Make the most of yourself, the best of yourself—that is what God meant each person to do, even to the smallest detail—and lack of personal neatness can hardly be classed as a trivial matter, either in business or in the home life.

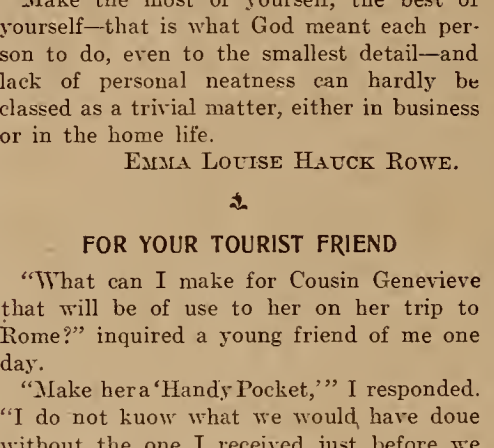
Emma Louise Hauck Rowe.

FOR YOUR TOURIST FRIEND

"What can I make for Cousin Genevieve that will be of use to her on her trip to Rome?" inquired a young friend of me one day.

"Make her a 'Handy Pocket,'" I responded. "I do not know what we would have done without the one I received just before we went to India. And tell your cousin, from one who has had experience, to have everything in readiness before the steamer starts, for she will undoubtedly need things handy for a few days after they once begin to 'sail the ocean blue.' Handkerchiefs without number should be placed in the 'etcetera' pocket—a few nice, dainty ones, but many old soft ones that are to be used, then thrown away. One may take it for granted that they will be blessed (?) with seasickness, and prepare accordingly. This sickness is indeed terrible while it lasts, but one is so happy to be over it that he soon forgets he ever was seasick. And after this stage has passed there is nothing to compare with an ocean voyage. Your cousin's own tastes and desires will dictate to her what she wishes to place in the 'and so forth' and '&' pocket—any articles that she may desire to be especially convenient, for it is not easy to lean over and get things out of a steamer-trunk. The ship at its best is rather 'rolly.'

"It is generally the custom to dress for dinner, especially if there be any English on board; hence, whatever little toilet arti-



cles are desired to be used in this process should be safely stored in one of these pockets.

"It will be none too large to have the foundation of this bag one yard square. Another yard is required to make the pockets, and the ones designed to hold the soap-dish, sponge or wash-cloths, nail and tooth brushes should be lined with rubber oil-cloth.

"Linen in its natural color is the best material used. About four inches from the top and two inches from the sides place the upper row of pockets. Some gather them on the bottom to give the required fullness, but I prefer to have a plait at the lower corner of each pocket, while the remainder of it is drawn taut. The greatest amount of work is in making the little lapels that button over the individual pockets, and yet they are essential and can be very quickly made on the machine by binding with bright-colored braid or tape.

"One can readily see from the illustration that each pocket is not made and sewed on separately, but that three strips are made for the three different sets of pockets. A row of stitching on the machine separates one pocket from its neighbor.

"The pocket containing well-stocked needle-cases and thimbles should also contain a dainty piece of fancy-work and crocheting, that the tourist may have something convenient when she wishes to while away her time at such pleasant work. The buttons should be in bags, with one sewed on the outside to show what kind is within. The case for the scissors should be made of chamois-skin or leather, and should be made like a spectacle-case, so that the sharp points will not be apparent in the pocket. The lower cases should be about one foot deep, while the others need to be six or eight inches in depth.

"The tooth-brush, nail-brush and scissors being narrow do not require a pocket more than three inches wide, yet they are more convenient if made wider. When the whole is finished fit another piece of linen as a back piece, and bind the two together with braid. Put on loops with which to hang it up, and ribbons with which to tie it together when rolled for carrying."

Ella Bartlett Simmons.

FIVE GOOD RECEIPTS

Okra a la Daube.—Take half a dozen tomatoes, cut them up fine after taking off the skins. Add to them two sliced onions, and fry in two tablespoonfuls of butter. When the onions are brown add a gill of hot water, a tablespoonful of flour and one quart of sliced okra. Let it simmer over a slow fire for about two hours; if it gets very thick add a little hot water. Season with pepper and salt, and pour it over two slices of lean ham which have been fried. This is an appetizing dish and you can utilize ham that has been cooked before.

Beets, Baked or Cold.—If crisp and fresh they need not stand in fresh water. If the least wilted or tough put them in cold water until tender, then scrape them thoroughly, and cut into thin slices. Put some butter into a baking-dish and let it melt, say a tablespoonful of butter to ten small, young beets. Then put in the beets, and salt and pepper them. Shake up about every ten minutes till the butter and seasoning get well worked into the beets, and bake in a moderate oven for two hours. After the first hour do not touch the beets, the shaking up is all to be done in the early stages of the cooking. Cold boiled beets dieed make a delicious salad, the mayonnaise combining tastily with the sweet beets.

"Herbes Fines."—In many French receipts you read of flavoring as being "herbes fines." A little is a great addition to omelettes, to warmed-over meats, minces, etc. You may prepare a quantity and it will last in perfect condition for two weeks in summer if kept cold, much longer in winter. Take a cupful of chopped shallots, or little onions, two or three parsley-leaves, some bits of celery, a bunch of thyme, sage and a little lemon-peel. Melt three ounces of butter, and add this chopped mixture. Stir for some time till the butter becomes clear, then put into a glass or earthen jar, and cover. Keep cool.

To Bake Egg-plant.—In the South the usual way of cooking egg-plant is to bake it. It is much more delicate than fried, and is esteemed on this account. Boil the egg-plant till it is tender, changing the water several times so it will not be bitter. When it is done, cut in two lengthwise, and scoop out the inside, being careful not to break the skin. Season the pulp with pepper, salt, butter and a few bread-crumbs. Return to the two halves of the skin, dust bread-crumbs over the top, set in a pan, and bake. It does not take long to boil them, but about one and one half hours is necessary to bake them brown.

Corn Oysters.—Parboil the corn, then grate it with a coarse grater (the kind known as "cabbage-grater" is best) into a deep dish. To each two ears of corn allow one egg. Beat the whites and yolks separately and add them to the corn with one tablespoonful of flour and one tablespoonful of butter. Salt and pepper to taste. Lay a spoonful at a time in hot butter, and fry brown on both sides.

Mrs. S. P. Moore.

OUR SUNDAY AFTERNOON

LEAN HARD

"Child of my love, lean hard,
And let me feel the pressure of thy care.
I know thy burden, for I fashioned it—
Poised it in my own hand, and made its weight
Precisely that which I saw best for thee.
And when I placed it on thy shrinking form,
I said, 'I shall be near, and while thou leanest
On me, this burden shall be mine, not thine.'
So shall I keep within my circling arms
The child of my own love; here lay it down,
Nor fear to weary Him who made, upholds,
And guides the universe. Yet closer come;
Thou art not near enough. Thy care, thyself,
Lay both on me, that I may feel my child
Reposing on my heart. Thou lovest me?
I doubt it not; then, loving me, lean hard."

A MESSAGE TO GARCIA

In all this Cuban business there is one man stands out on the horizon of my memory like Mars at perihelion. When war broke out between Spain and the United States it was very necessary to communicate quickly with the leader of the insurgents. Garcia was somewhere in the mountain fastnesses of Cuba—no one knew where. No mail nor telegraph message could reach him. The president must secure his co-operation, and quickly.

What to do!

Some one said to the president, "There's a fellow by the name of Rowan will find Garcia for you if anybody can."

Rowan was sent for and given a letter to be delivered to Garcia. How "the fellow by the name of Rowan" took the letter, sealed it up in an oilskin pouch, strapped it over his heart, in four days landed by night off the coast of Cuba from an open boat, disappeared into the jungle, and in three weeks came out on the other side of the island, having traversed a hostile country on foot, and delivered his letter to Garcia, are things I have no special desire now to tell in detail.

The point I wish to make is this: McKinley gave Rowan a letter to be delivered to Garcia; Rowan took the letter and did not ask, "Where is he at?" By the Eternal! there is a man whose form should be cast in deathless bronze and the statue placed in every college of the land. It is not book-learning young men need, nor instruction about this or that, but a stiffening of the vertebrae which will cause them to be loyal to a trust, to act promptly, concentrate their energies; do the thing—"Carry a message to Garcia!"

General Garcia is dead now, but there are other Garcias.

No man who has endeavored to carry out an enterprise where many hands were needed but has been well nigh appalled at times by the imbecility of the average man—the inability or unwillingness to concentrate on a thing and do it. Slipshod assistance, foolish inattention, dowdy indifference and half-hearted work seem the rule; and no man succeeds unless, by hook or crook or threat, he forces or bribes other men to assist him; or, mayhap, God in his goodness performs a miracle, and sends him an angel of light for an assistant. You, reader, put this matter to a test: You are sitting now in your office—six clerks are within your call. Summon any one and make this request, "Please look in the encyclopedia and make a brief memorandum for me concerning the life of Correggio."

Will the clerk quietly say, "Yes, sir," and go do the task?

On your life he will not. He will look at you out of a fishy eye and ask one or more of the following questions:

Who was he?

Which encyclopedia?

Where is the encyclopedia?

Was I hired for that?

Don't you mean Bismarck?

What's the matter with Charlie doing it?

Is he dead?

Is there any hurry?

Sha'n't I bring you the book and let you look it up yourself?

What do you want to know for?

And I will lay you ten to one that after you have answered the questions, and explained how to find the information, and why you want it, the clerk will go off and get one of the other clerks to help him try to find Garcia—and then come back and tell you there is no such man.

Now if you are wise you will not bother to explain to your "assistant" that Correggio is indexed under the C's, not in the K's, but you will smile sweetly and say, "Never mind," and go look it up yourself.

And this incapacity for independent action, this moral stupidity, this infirmity of the will, this unwillingness to cheerfully catch hold and lift, are the things that put pure socialism so far into the future. If men will not act for themselves, what will they do when the benefit of their effort is for all? A first mate with knotted club seems necessary; and the dread of getting "the bounce" Saturday night holds many a worker to his place.

"You see that bookkeeper," said the foreman in a large factory.

"Yes, what about him?"

"Well, he's a fine accountant, but if I'd send him up town on an errand, he might accomplish the errand all right, and, on the other hand, might stop at four saloons on the way, and forget what he had been sent for."

Can such a man be intrusted to carry a message to Garcia?

We have recently been hearing much maudlin sympathy expressed for the "down-trodden denizen of the sweat-shop" and the "homeless wanderer searching for honest employment," and with it all often goes many hard words for the men in power.

Nothing is said about the employer who grows old before his time in a vain attempt to get frowzy ne'er-do-wells to do intelligent work, and his long, patient striving with "help" that does nothing but loaf when his back is turned. In every store and factory there is a constant weeding-out process going on. The employer is constantly sending away "help" that have shown their incapacity to further the interests of the business, and others are being taken on. No matter how good times are, this sorting continues, only if times are hard and work is scarce the sorting is done finer—but out and forever out the incompetent and unworthy go. It is the survival of the fittest. Self-interest prompts him to keep the best—those who can carry a message to Garcia.

I know one man of really brilliant parts who has not the ability to manage a business of his own, and yet who is absolutely worthless to any one else because he carries with him constantly the insane suspicion that his employer is oppressing or intending to oppress him. He cannot give orders, and he will not receive them. Should a message be given him to take to Garcia, his answer would probably be, "Take it yourself."

To-night this man walks the streets looking for work. No one who knows him dare employ him, for he is a regular firebrand of discontent. He is impervious to reason, and the only thing that can impress him is the toe of a thick-soled No. 9 boot.

Of course, I know that one so morally deformed is no less to be pitied than a physical cripple; but in our pitying let us drop a tear, too, for the men who are striving to carry on a great enterprise, whose working-hours are not limited by the whistle, and whose hair is fast turning white through the struggle to hold in line dowdy indifference, slipshod imbecility, and the heartless ingratitude which, but for their enterprise, would be both hungry and homeless.

Have I put the matter too strongly? Possibly I have; but when all the world has gone a-slumming I wish to speak a word of sympathy for the man who succeeds—the man who, against great odds, has directed the efforts of others, and, having succeeded, finds there's nothing in it; nothing but bare board and clothes.

I have carried a dinner-pail and worked for day's wages, and I have also been an employer of labor, and I know there is something to be said on both sides. There is no excellence, per se, in poverty; rags are no recommendation; and all employers are not rapacious and high-minded any more than all poor men are virtuous.

My heart goes out to the man who does his work when the "boss" is away as well as when he is at home. And the man who, when given a letter for Garcia, quietly takes the missive without asking any idiotic questions, and with no lurking intention of chucking it into the nearest sewer, or of doing aught else but deliver it, never gets "laid off," nor has to go on a strike for higher wages. Civilization is one long, anxious search for just such individuals. Anything such a man asks shall be granted; his kind is so rare that no employer can afford to let him go. He is wanted in every city, town and village—in every office, shop, store and factory. The world cries out for such; he is needed, and needed badly—the man who can carry a message to Garcia.—Elbert Hubbard, in the "Philistine."

THE EDUCATIONAL NEEDS OF THE AVERAGE WOMAN

What, then, does the average woman need? In the first place, a thorough manual training. She needs to know how to cook a wholesome meal properly, to put it on the table appetizingly, and to do this with the minimum expenditure of energy. It is one of the most hopeful signs in elementary education that kitchen-gardening and household training are being introduced into those schools which the children of the general population attend. The need of this practical domestic training for girls has probably been sufficiently emphasized, but in the general readjustment of occupations and duties going on between men and women it is more and more apparent that boys as well as girls need a certain amount of elementary domestic training. It is a mere fetish, for instance, that women should do all the mending or even have all the care of children. There are many families in which family happiness, comfort and prosperity would be greatly promoted if the husband and father could, at least in an emergency, take a competent share in the routine work of the household. There are many generous and kindly husbands who would be glad to help, but who are incapable through lack of elementary training. Since the bearing and rearing of children is the most important function of women, the mother must be relieved, at least at times, from many of her ordinary household cares. If there be not money enough to hire extra service, it is inevitable that the father should take, at least temporarily, some of these duties, if the family is to be maintained in comfort.—Popular Science Monthly.

USES FOR LEMONS

The juice of a lemon taken in hot water on awakening in the morning is an excellent liver corrective, and for stout women is better than any anti-fat medicine.

Glycerin and lemon-juice, half and half, on a bit of absorbent cotton is the best thing in the world wherewith to moisten the lips and tongue of a fever-parched patient.

A dash of lemon-juice in plain water is an excellent tooth-wash. It not only removes tartar, but sweetens the breath.

A teaspoonful of the juice in a small cupful of black coffee will almost certainly relieve a bilious headache.

The finest of manicure acids is made by putting a teaspoonful of lemon-juice into a cupful of warm water. This removes most stains from the fingers and nails, and loosens the cuticle more satisfactorily than can be done by the use of a sharp instrument.

YOU WILL NEVER BE SORRY

For doing your level best.
For your faith in humanity.
For being kind to the poor.
For hearing before judging.
For being candid and frank.
For thinking before speaking.
For discounting the tale-bearer.
For being loyal to the preacher.
For standing by your principles.
For stopping your ears to gossip.
For asking pardon when in error.
For the influence of high motives.
For bridling a slanderous tongue.
For being generous with an enemy.
For being square in business deals.
For sympathizing with the oppressed.

A CHARACTERISTIC OF GREAT MEN

"So far as I have encountered them," said a citizen of the world, "a characteristic of great men is that they have time. They are not in a hurry; their work doesn't boss them, but they boss their work. They don't act as if every minute you stayed was valuable time lost to them; they don't fret and fidget. What time they do devote to you appears to be time that they can spare, and take things easy in, and be comfortable. The work seems to be incidental, and it seems as though they could turn to it when the time came and get through it with ease; and they always seem, besides, to have strength in reserve. It is a characteristic of the great man that he has time."—New York Sun.

AT THE DENTIST'S

I've had a holler tootb filled, an'
  I didn't yell a mite;
The dentis' called me "little man"—
  Tho' onct I tried to bite.
But I wnz honn' to stan' it, for
  Pa said, "Now, Jimmy, lad,
Perten' yon've been away to war
  And you've got wonnded, had."

The dentis' said, "That cav'ty
  Can't be fixed np too qnick;"
A tiny mirror helped him see
  Upon a weeny stick!
He stretched my month, I gness a mile;
  So, gee! I nearly died;
For, my! I conldn't swaller while
  He wuz at work inside!

An' then he dug an' dng an' dug—
  But what I hated wnz
The thing I call a "doodle-hug;"
  'Canse, sakes! hnt it can hnzz!
He'd put that in, an' whir an' whlr
  Till it wud feel red-hot—
I don't want more of that; no, sir!
  Sh'd say I'd rather not.

An' even when he didn't toucb
  A place that hnrt a bit,
Somehow it hnrt me jus' as much,
  Since I wuz 'spectin' it.
But when he got the malgum stnff
  All wadded in an' flat,
I said, "Oh, pooh! I'm pretty tongh!
  I've stood lots more than that!"

NOT TO BE PUMPED

A small Scotch boy had been summoned to give evidence against his father, who was accused of disorderly conduct in the streets. The bailie began to wheedle him:

"Come, my wee mon, speak the truth, an' let us know all ye ken about this affair."

"Weel, sir," said the lad, "d'ye ken Inverness street?"

"I do, laddie," replied his worship.

"Weel, ye gang along it, and turn into the square, and cross the square—"

"Yes, yes," said the bailie, encouragingly.

"And when ye gang across the square ye turn to the right and up into High street, and keep on up High street till ye come to a pump."

"Quite right, my lad: proceed," said his worship; "I know the old pump well."

"Weel," said the boy, with a look of infantile simplicity, "ye may gang and pump it, for ye'll no pump me."—Baptist Union.

RIGHT AFTER ALL

A head adorned with shaggy and unmanageable whiskers was thrust out of the window, and a voice that fitted the beard inquired:

"What is it?"

"Oh, is this Mr. Higgins?" came a still, small voice from the shade of the doorway below.

"Yes."

"Please come to 414 High street just as quick as you can, and bring your instruments."

"I ain't no doctor; I'm a carpenter. Dr. Higgins lives in the next street." And the widow came down with a slam that told of former experiences of the same kind on the part of the humble artisan.

But Carpenter Higgins had not got comfortably back into bed before the bell rang again, and uttering some remarks, he rose once more and went to the window.

"Well, what do you want now?" he ejaculated.

"Please, sir," said the little voice, "it's you we want. Pa an' ma is shut up in the foldin'-bed, an' we can't get 'em out."—Pearson's Weekly.

NO DIFFERENCE

Lightning-rod agent (triumphantly)—"I have done a good piece of work to-day, my dear. Got old Farmer Hawhuck's signature to this contract for me to rod his house and barn for one hundred and sixty-five dollars. I—Well, by George! here's a funny mistake in the contract—a 'h' accidentally put in the place of a 'd' makes me agree to rob his house and barn for that sum of money."

Wife—"That is near enough, isn't it, Leander?"—Judge.

ALMOST ALL RIGHT

There once was a writer named Wright,
Who instructed his son to write right.
He said, "Boy, write Wright right;
It is not right to write
Wright awry: try to write Wright aright!"
—Carolyn Wells.

ITS PATHOS LOST

"Now, is that not pathetic?" said a benevolent-looking old gentleman, standing with a friend in a near-by doorway. "See how the poor crave ice this sultry weather! You and I, who can get any sort of refreshing drink whenever we want it, can't imagine what a luxury it is to them! That little fellow is happy because he has rescued a morsel of coolness from a filthy gutter! Come here a minute, my boy."

The child approached by cautious detours, shifting his ice from one hand to the other.

"Here is a dime for you," said the old gentleman, kindly. "Go buy yourself a glass of lemonade. You mustn't eat that stuff; it may make you sick."

"I wasn't goin' t' eat it," replied the gamin, seizing the coin.

"Indeed!" exclaimed the philanthropist, in surprise. "What did you want with it, then?"

The urchin grinned.

"I wanted ter put it down de blind man's back," he replied.—New Orleans Times-Democrat.

LITTLE BITS

"Persons who stammer," said the pseudo-scientific boarder, "do so because they think faster than they can talk."

"Is that the reason," asked the savage bachelor, "that we so seldom meet a woman who stammers?"—Indianapolis Journal.

"Money," said the philosopher, "may often do more harm than good. Sometimes the mighty dollar is a man's worst enemy."

"Yes," answered Senator Sorghum; "and I often feel that a number of people love me for the enemies I have made."—Washington Star.

"And so her father got rich out of an invention? Well, I'm surprised. He doesn't look as if he knew enough to invent anything."

"He didn't invent anything except a plan for freezing out the inventor."—Chicago News.

An intelligent farmer has discovered that by planting onions and potatoes in the same field in alternate rows the onions become so strong that they bring tears to the eyes of the potatoes in such volume that the roots are kept moist and a big crop is raised in spite of the drought.

"Have you heard from your son in the Philippines, Mrs. Parkins?"

"Oh, yes, indeed, Mrs. Jones. He writes regularly."

"And is bis heart in this war?"

"I don't exactly know. I judge from what he says that it is in his boots most of the time."

Aunt Ethel—"Well, Beatrice, were you very brave at the dentist's?"

Beatrice—"Yes, auntie, I was."

Aunt Ethel—"Then there's the ten cents I promised you. Now tell me what he did to you."

Beatrice—"He pulled out two of Willie's teeth!"

A troubled but trusting subscriber recently wrote to the editor of the Huron, Kansas, "Herald:" "What ails my hens? Every morning I find one or more of them keeled over, to rise no more."

The reply was: "The fowls are dead. It is an old complaint, and nothing can be done except to bury them."

"Clara Jane," said the returned soldier, whose heart was beating tumultuously, "you must pardon me if, in my confusion, I gave you the military salute when I came in."

"But you didn't, Oscar," shyly replied the maiden, who had formed a crude idea of the military salute from what she had read about Hobson.—Chicago Tribune.

"Yes," he said, as he was showing a friend the beauties of the city, "this is the Grand street bridge. You may remember hearing that a woman fell from here some time ago and lost one of her eyes."

"She did?"

"Yes; and then she sued the city for $15,000."

"That was an eye dear, wasn't it?"

Mother—"You brought this on yourself, Charlie. I told you that all that apple pie you ate last night would throw your digestion out of order."

Charlie—"'Tain't out of order, ma; it's in order."

Mother—"Charlie! when you are suffering so, how can you say your digestion is in order?"

Charlie—"Well, it is, ma—in apple pie order."

PATTERNS OF SEASONABLE GARMENTS

We offer this month a selection of up-to-date patterns suitable to the season. The patterns are full and complete, being especially suited for home dressmaking.

No. 7744.—BOYS' OUTING SHIRT. 10 cents.
Sizes, 10, 12, 14 and 16 years.

No. 7733.—GIRLS' YOKE DRESS. 10 cents.
Sizes, 4, 6, 8 and 10 years.

No. 7717.—GIRLS' DRESS. 11 cents.
Sizes, 6, 8, 10 and 12 years.

No. 7722.—BOYS' SIDE-PLAITED DRESS.
10 cents.
Sizes, 2 and 4 years.

No. 7713.—MISSES' WAIST. 10 cents.
Sizes, 12, 14 and 16 years.

No. 7738.—LADIES' PETTICOAT. 11 cents.
Sizes, 22, 24, 26, 28 and 30 inches waist.

No. 7714.—LADIES' SHORT NIGHT-GOWN, OR DRESSING-SACK. 10 cents.
Sizes, 34, 36, 38, 40, 42 and 44 inches bust.

No. 7718.—LADIES' YOKE WAIST. 10 cents.
Sizes, 32, 34, 36, 38 and 40 inches bust.

No. 7752.—LADIES' SHIRT-WAIST. 10c.
Sizes, 32, 34, 36, 38, 40 and 42 inches bust.

No. 7709.—GIRLS' DRESS. 10 cents.
Sizes, 6, 8, 10 and 12 years.

No. 7746.—LADIES' SHIRT-WAIST. 10 cents.
Sizes, 32, 34, 36, 38, 40 and 42 inches bust.

No. 7748.—LADIES' WAIST. 10c. Sizes, 32, 34, 36, 38 and 40 in. bust.
No. 7712.—LADIES' SKIRT. 11c. Sizes, 22, 24, 26, 28 and 30 in. waist.

No. 7726.—LADIES' BLOUSE WAIST WITH SAILOR COLLAR. 10c.
Sizes, 32, 34, 36, 38 and 40 inches bust.

No. 7731.—LADIES' SCALLOPED FLOUNCED SKIRT.
11 cents. Sizes, 22, 24, 26, 28 and 30 inches waist.

No. 7353.—LADIES' CHEMISE. 10 cents.
Sizes, 32, 34, 36, 38, 40, 42 and 44 in. bust.

No. 7737.—LADIES' SHIRT-WAIST. 10 cents.
Sizes, 32, 34, 36, 38, 40 and 42 inches bust.

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Full descriptions and directions—as the number of yards of material required, the number and names of the different pieces in the pattern, how to cut and fit and put the garment together—are sent with each pattern, *with a picture of the garment to go by.* These patterns are complete in every particular, there being a *separate* pattern for *every single piece* of the dress. All orders filled promptly.

For ladies, give BUST measure in inches. For SKIRT pattern, give WAIST measure in inches. For misses, boys, girls or children, give both BREAST measure in inches and age in years. Order patterns by their numbers.

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"GLEASON'S HORSE BOOK" Professor Gleason is renowned throughout America as the most expert and successful horse-trainer of the age. For breaking colts, conquering vicious horses and trajuing horses he is a perfect wonder. His methods are simple and sensible, and can be put into use by any young man on the farm. The book contains 130 illustrations and 415 pages, each page 5½ inches wide by 7½ inches long. It tells all about the horse. There are chapters on "Educating the Horse," "Teaching Horses Tricks," "How to Buy," "How to Feed, Water and Groom," "Breeding and Raising Horses," "Breaking and Taming," "Methods of Detecting Unsoundness," "The Teeth," "Horseshoeing," and "Diseases of the Horse." This book, in expensive binding, was sold by agents for $2 a copy.

"SAMANTHA AT SARATOGA" and "SAMANTHA AMONG THE BRETHREN"

These two excruciatingly funny books by that clever humorous writer, **"Josiah Allen's Wife,"** are decidedly her very best productions, and they are sure to

...MAKE YOU LAUGH UNTIL YOU CRY

"Samantha at Saratoga" was written under the inspiration of a summer season 'mid the world of fashion at Saratoga, the proudest pleasure resort in America. The book takes off the follies of fashionable dissipation in the author's inimitable and mirth-provoking style. The story of Samantha's "tower" to Saratoga, accompanied by her "wayward pardner," is extremely funny.

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"Oh! argue and dispute with a dyin' man!"

ONE OF THE ILLUSTRATIONS FROM "SAMANTHA AMONG THE BRETHREN" (GREATLY REDUCED)

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Children and grown people alike read with rapturous delight these two "Samantha" books. They are written in a vein of strong common sense, as pure and innocent as the prattle of a child.

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	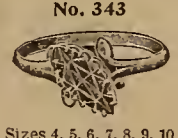							
Sizes 4, 5, 6, 7, 8, 9, 10	Sizes 4, 5, 6, 7, 8, 9, 10	Sizes 4, 5, 6, 7, 8, 9, 10	Sizes 5, 6, 7, 8, 9, 10, 11	Sizes 5, 6, 7, 8, 9, 10, 11	Sizes 4, 5, 6, 7, 8, 9, 10	Sizes 3, 4, 5, 6, 7, 8, 9	Sizes 3, 4, 5, 6, 7, 6, 9	Sizes 4, 5, 6, 7, 8, 9, 10

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No. 343—An Emerald (green); a very popular ring.
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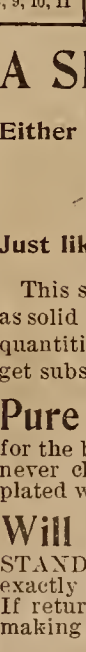

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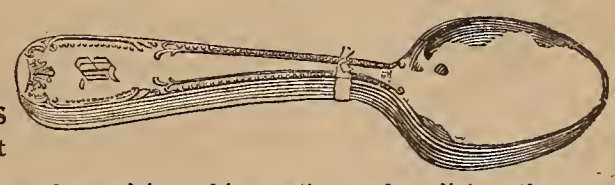

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SELECTIONS

WHAT MAN IS MADE OF

TO BUILD a one-huudred-aud-fifty-eight-pound man only fourteen elements altogether are needed. Five of them are gases—there is enough gas in a man to fill a gasometer of 3,649 cubic feet—and nine are solids, found in almost any handful of clay you might take up at random; that is to say, carbon, calcium, phosphorus, iron, sulphur, sodium, potassium, silicon and magnesium. In most people minute quantities of a few other things are found, such as copper, aluminium, manganese, lead, mercury, arsenic aud lithium; but these substances are probably always trespassers.

Far and away the most important element in flesh and bone is oxygen, and the bulk of that energetic gas which remains tranquilly compressed within us is somethiug marvelous. In a one-hundred-and-fifty-eight-pound man the weight of oxygen is no less than 106 pounds, and the natural bulk of it, if it were set free, would be equal to a beam of wood one foot square and 1.191 feet—nearly a quarter of a mile—long, or several hundred times the bulk of the body itself. Measured by the gallon it would fill 202 thirty-six-gallon barrels.

Even bulkier, though lighter, is hydrogen, the constituent. Every man's body contains sufficient of this lightest of all substances to inflate a balloon that would lift himself, balloon and tackle. In the man, for instance, the bulk of hydrogen is over 2,400 cubic feet—equal to the cubic space of a roou 10 feet high and 15½ feet square, and the weight of it is a trifle short of 13½ pounds.

Of that inexplicable gas, nitrogen, there is about half an ounce to each pound of body weight, or approximately 4½ pounds altogether in a one-hundred-and-fifty-eight-pound man. It is about twenty times the bulk of the body, and by no means likes being cramped up iu a space of a few cubic inches. This is the most inert gas known. Its bulk in the body is 58 cubic feet. The reason it is said to be lifeless is that it hates every other element in the world; and while oxygen, hydrogen, carbon and the other things, like the coutinental powers, cannot live alone, nitrogen, like England, will not, if it can possibly avoid it, live in company. From this trait arises not only all the action of the human brain and the strength of the muscles, but the terrible force of all the great explosives.

While individually without any energy whatever, when it does chance to enter into union with other things nitrogen becomes the most energetic substance in existence. The great explosive force of nitroglycerin is due to azote. One of the most frightful explosives known is chlorid of nitrogen, which goes off if the sun shines on it or if a leaf touches it; and in the human body it is the breaking down of nitrogen compounds which actually constitutes life. Nothing can be alive without nitrogen, itself the type of death. The last of the substances of any bulk in the body is carbon. There is, as nearly as possible, a sack of 21½ pounds in a one-hundred-aud-fifty-eight-pound man, sufficient to make some sixty-five gross of lead-pencils.—Harmsworth Magazine.

TO KEEP MOSQUITOES AWAY

Piazza comfort is what you make it in these days of outdoor conveniences and luxuries, and if only mosquitoes wouldn't rush in, veranda existence would be ideal on these moonlight nights. To be sure, many a householder has his veranda tightly screened so that they can't so much as poke a bill in anywhere; but all this security keeps out not only the air, but the sense of being out of doors as well, and so piazza-screens have their drawbacks as well as their uses. Smudges and the Japanese incense are all very well on a calm night; but let the wind blow ever so gently and the sparks are bound to alight on muslin gowns and burn a hole that looks as if the wearer had dropped thereon a bit of fire from a cigarette, and this would never do. Though between ourselves cigarettes do keep mosquitoes at bay, and more than one woman has been heard threatening to take to smoking if the pesky things didn't leave her alone. But there is a certain preparation—a mixture which any one can have—that these disturbers of the peace hate; and it can be used without detriment to gowns, morals or good manners, and it reads like this: Of hemlock and camphor-oil one ounce each, of olive-oil three quarters of an ounce, of turpentine and kerosene one eighth of an ounce each; mix, and shake well. If the mosquitoes are thicker than you ever saw them, wet a cloth with this preparation and wave it about you occasionally; if they are tolerably annoying, wet cloths with it and put them on the piazza railing at intervals—experience will teach you the proper length of these intervals. And you needn't be afraid to put some of the stuff on your hands and on your face. It is perfectly harmless, and the odor of it is rather pleasant than otherwise, as it is distinctly "woodsy." It carries well, too, but for some reason the "skeets" fight shy of it.

A CLOTHES-PIN THAT COST EDISON TEN DOLLARS

Possibly one of the secrets of Thomas A. Edison's success as an inventor is his forethought. The Wizard of Menlo Park does not believe in leaving anything undone that can be done to further his researches. An illustration may be cited in his wonderful curiosity-shop. This shop is a high-ceilinged room, the walls of which are filled with shelves divided into pigeonholes and drawers. Here are kept and properly labeled all manner of materials used in laboratories and workshops. No mineralogist has a finer collection of specimens. As to woods, the Smithsouian Institution or the Metropolitan Museum of Natural History are not more complete. The collection, for instance, of bamboo fiber used in the electric-light bulbs comprises every specimen known to science.

Besides these, the shop contains everything that an inventor could possibly want, whether he were inventing a new dynamo or a hobby-horse that would shy at bicycles, or devising a gigantic electrical reproduction of the battle of Manila. Mr. Edison's idea in making the collection was to provide against any contingency that might arise.

"I want," he said, "to be prepared for any emergency. I don't want a million-dollar idea to go to waste while I am sending to town for ten cents' worth of material from the village store."

When the shop was stocked Mr. Edison thought he would test its completeness. Therefore he offered a prize of ten dollars to any of his assistauts who should mention any material of possible use not contained in the collection. The prize was won by a bright young man after a hard day's work. And the missing article was a clothes-pin.

ELECTROLYTIC PRODUCTION OF COPPER

A large amount of the copper produced in this country is now refined electrically, and is known as electrolytic copper. Some of the Western works turning out this product, especially where water-power is obtainable, are very large. One of them at Great Falls, Montana, has nine dynamos of a total of about 2,500 horse-power, all driven by the Missouri river, which there rushes through a deep gorge. The copper-ore is ground up and cast into pigs, and the pigs are then huug in large tanks filled with a solution consisting chiefly of copper sulphate. A heavy electric current at low pressure is passed through the series of tanks, decomposing the copper pigs, and the metal is electrolytically transferred by the solution to sheets of copper hanging in each tank, so that practically the sheets are copper-plated. The metal obtained is very pure. The refuse which falls to the bottom of the tanks is rated at $2,500 a ton, and it is said that the gold and silver obtained from it pay the cost of the electric process.

DANGER FROM INCANDESCENT LAMPS

A recent writer has pointed out the common error of supposing that there is no danger from fire arising from incandescent lamps. After several fires had been started where these lamps had been placed carelessly among tapestries, investigation showed that enough heat is given out by one of these lamps to start a fire. When an incandescent lamp was placed in a bowl of water and the current turned on the water soon became warm, and then began to bubble. An experiment with cotton proved the point more conclusively. A lamp was put in among some cotton, and soon the cotton was on fire. Celluloid will begin to burn in five minutes after the lamp has been placed in proximity to it. Incandescent lamps have, therefore, been declared dangerous in some places, and are subject to the same precautions as other lights.—Normal Instructor.

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THE TURKISH FARMER

BY EDWARD A. STEINER

I HAVE left this Turkish farmer to come last in my descriptions of European peasantry, first because he is last in the scale of civilization, and secondly because he is the most difficult to approach and hardest to describe.

Turkey is composed of a mixture of races and religions: Jews, Kurds, Circassians, Albanians, Tartars, and finally the real Turks, or Osmanlis. The Jews and Armenians are traders and mechanics, the Kurds and Circassians are shepherds, robbers and slave-dealers, and the Albanians and Turks are the real farmers.

The Kurdish and Circassian houses are usually underground dwellings, the cattle-stable being one of the rooms of the house. The cooking-stove consists of an earthen jar, wider in the middle than at the top and bottom. Into this receptacle fuel consisting of dried cow dung and straw is thrown, and over it a kettle is suspended by a chain. Beside this stove the women sit, regardless of the smoke and flame, which come like the fumes of a volcano and are a sure preventive against the intrusion of an American. The smoke gets out as best it can through the one window of the underground hole, but the smell always remains. The furniture, which is very simple, consists of a few rugs spread out on the floor and some leather wallets, which contain all the personal effects of the family. This is all there is to be seen in a Kurdish shepherd's home save a lot of guns and pistols.

This one room is used as kitchen, sitting and sleeping room; here the little Kurds are born, and here the big Kurds die, unless, as is often the case, they die on the field in a bloody fray. There is a storeroom close by the living-room which contains a cistern filled by earthen jars, and in these is brewed the family drink, called boza, which is pronounced very much like our "booze."

Kurdistan is a barren country, and pasturage is the only agricultural pursuit. Many of the tribes wander from highland to highland, seeking pasturage and water for their flocks. I have seen a tribe from the mountains on the march in a valley below me, and although it was an exceedingly picturesque sight, yet it would have been somewhat dangerous in closer proximity. The baggage of the tribe is carried by bullocks, who also carry the babies and the cradles. The women are armed and are as ferocious as the men; in fact, those who have fallen into their hands prefer to deal with the men. The women are not content with robbing a man, but they will strip him to the waist, scratch and pinch him in truly feminine fashion, and put as many thorns into his body as it will hold. The men go about heavily armed, and their sole business is to look after the bullocks, and let the women do the rest.

The Albanians live in the mountains which stretch along the Adriatic and in the spurs which stretch toward the Balkan plains. The whole country is just one vast sea of rocks, while the people are as unfriendly as Nature, and generally as untrustworthy and dangerous as the Kurds. The villages are made up of gloomy houses, built of stone, with no windows upon the street. Many of the larger farm-houses are regular fortresses, surrounded by high walls, with loopholes for the muskets, and it is no rare thing to enter a village and hear the rattling of the guns, and step into the midst of a bloody battle. There is a village green with a public threshing-floor, and up to the time when the snow flies you can hear the "clippety-clap" of the threshing-flails swung by the women, for here as elsewhere in Turkey the husband does the bossing and the wife does the rest.

The dress of the Albanian is peculiar, for the men wear short skirts, which on Sundays are clean and stiffly starched, and to see them sittiug down and carefully lifting their skirts is rather amusing. Yet these womanly looking men are good fighters and prefer a fight to going to church or to their mosque. A war involving whole villages may start from the merest trifles, such as the breaking of a pitcher by rowdyish boys, or the killing of a rabbit on the neighbors' hunting-ground, so that the white skirts of our Albanian farmers are often seen with spots of their neighbors' blood upon them, which spots are a sign of heroism.

The crops they raise are varied, but rather scant. On the sea-shores of the Adriatic all the tropical fruits, such as oranges, figs and olives, will grow, but in the mountains a little oats is as much as the farmer expects. The plow all over Turkey is a wooden stick, and the poor, rocky soil is not even decently tickled by it.

The life among them is the most cheerless imaginable. It is made up of much fighting, little working and less eating, save on such rare occasions as a birth or a marriage feast. Mutton is the chief article of food, and if it were not for this not only the most patient, but the most economical beast, the sheep, two thirds of the Turkish people would starve to death.

The fertile lands of Asia-Minor are settled largely by genuine Turks, where the farms are larger and a little more cheerful and peaceful. The houses are of two stories, even the humblest one containing two rooms, the "haremlik" in the rear of the house the abode of the women, and the "selamlik" the men's apartment, being connected by a sort of neutral ground called "mabein." Often the house is surrounded by a cheerful garden, mulberry and locust trees shade the yard, and flowers seem to be much loved and cultivated. No man except the husband ever gets further than the "selamlik," and the women of the "haremlik" never leave the house unless closely veiled and carefully watched.

The Turkish farmer of the old school rarely has less than one nor more than two wives. It is rather an expensive luxury, as women are bought at regular market prices, and have to be fairly well provided for. The "haremlik" often is a place of intrigue, scuffling, wire-pulling and hair-pulling, and the younger Turks are satisfied with one wife. Looking at polygamy as closely as it is possible for a stranger to see it, I am firm in the belief that it is dangerous to society and hard on the men, not to say anything about the women, who if well treated are like parrots in a gilded cage, and if ill treated are like the old cats which everybody abuses in one's back yard. I also am of the conviction that gradually polygamy will die out in Turkey as it has passed away from Judaism.

Worse from the standpoint of comfort than the multiplicity of wives is the superabundance of a certain kind of insects which abound and increase like the sands of the sea-shore. A visit to a Turkish home is always followed by an unusual activity, for the fleas are not killed as in other countries, but are permitted to grow and enjoy an unusual liberty. The fact is, as an Armenian friend told me, the Turk is too lazy to jump after a flea, which may be the real reason for their superabundance.

Only two meals a day are served among the Turks; the breakfast about eleven o'clock, the dinner at sunset. The farmer eats a meal of bread and cheese early in the morning, never neglecting his coffee, which is always brought to him by his wife, who also fills his pipe for him, lights it, and so starts her husband on his day's work.

The birth of a baby, if it is a boy, brings great joy to a household, but the father is not permitted to see his heir until eight days after his birth. The baby is tightly swathed, wrapped in numerous blankets, and looks ugly enough, which is done purposely to avoid the "evil eye." I am very fond of babies, and even the homeliest one gets a kiss and a compliment from me; but upon telling a Turk that he was the father of a beautiful baby, I was politely told that I must not lie, for the baby was the homeliest imp that ever lived. This was done to avoid that "evil eye," which is the bane not only of the Turks, but of many other superstitious people. The proper thing to do when you see a Turkish baby is this: First spit on it, then say, "What a nasty, ugly, cross-eyed thing it is." This will please the mother better than a compliment.

The Turkish peasant is the most remarkable farmer in the world in this one respect: he never grumbles about the weather nor complains about poor crops. "It is the will of Allah." If the locusts come and eat up his crops "it is the will of Allah." If it is too dry or too wet "it is the will of Allah." It would be a sin to complain. In fact, whatever happens is accepted in the same spirit of resignation, which is very beautiful, but rather hard on the development of the country. I suggested to a farmer the spraying of his fruit-trees against a common pest, which usually got half the crop; but he looked at me with calmness and disgust, and said, "If Allah sends the pest, his will be done." In this fatalistic spirit the Turk lives and dies. There is no enterprise, no hurry, no anxiety; everything moves as it moved five hundred years ago, and I suppose will move in this way until "moons shall wax and wane no more."

TURKISH LIFE

AS IN most oriental cities, there are two distinct modes of existence in Constantinople—the outdoor life and the indoor life. The majority of Turks leave their homes in the morning and return late in the afternoon when their work is done. During the day they live out of doors in the bazaars, but as soon as the Turk has completed his business he goes home, and if you ask for him you will be told that he is in the harem, and not to be disturbed, and, as a rule, his servants will refuse even to inform him of your presence. If it is indispensable that you should see him, you may wait his pleasure in the selamlik, the room for receiving male guests, which is found in every Turkish house, and beyond which are the mysterious regions of the harem. "Harem," in the modern acceptation of the word, merely means the private apartments, and these would be called by the same name even in a bachelor's establishment inhabited solely by men, but generally it is applied to every place intended for women. The end of the Turkish railway carriage curtained off from the rest is harem; so is the ladies' cabin on board ship, and the latticed gallery in a mosque. In the dwelling-house it is all that quarter inhabited by the wife and children and other ladies of the family. And here I may say that few Turks nowadays have more than one wife, though the Koran allows every man four at a time, and encourages a constant change by facilitating divorce.

The traditional Turk with his innumerable women no longer exists, except as a very rare exception, but the Mussulman has not sacrificed the advantages of the privacy granted him by the Mohammedan law and custom. Whatever exists or goes on behind the doors leading out of the selamlik belongs to his private life, and no one with any knowledge of Eastern manners would think of even suggesting the existence of women in the house.—From "Constantinople," by F. Marion Crawford.

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WITH THE VANGUARD

Two views of the proposition to solve the race question of the South by the exodus of the black man are expressed in recent interviews of the Chicago "Times-Herald." President Booker T. Washington, of the Tuskegee Normal and Industrial Institute, Tuskegee, Alabama, said:

"The next census will show that the negroes number about 10,000,000, of whom 8,000,000 at least are in the South. I regard it as impracticable to move any large proportion of that total. I have recently returned from Europe. While in London, which is the center of African interests nowadays, I made a special study of Africa. Africa is the only place for the black man to go, but it is now parceled out among European powers. I should prefer to stay here and take my chances rather than take them under an alien flag. Outside Liberia there is no room in Africa, and Liberia is small and unhealthful. The black race must work out its own future in the South by education, mechanical, intellectual and moral. When you consider that only for thirty years has the experiment been made you will not be too hasty in your judgment. Thirty years is a short time in an evolution. What the negro needs is property and education, and when he gains those he will gain his rights. At my school we have one thousand students; we give instruction in twenty-six industries, and the students have seven hundred acres of land under cultivation."

Bishop Henry M. Turner, one of the leaders of the Liberia colonization scheme, said:

"You whites never get along with any other race. As I read history you have oppressed them all. A down-trodden, abject, demoralized race excites plenty of pity, but it never gets any respect. A nation to be a nation must get by itself, have its commerce, its laws, its literature, its bishops, its statesmen. That is what we blacks want. I feel that we can do it. Give us a chance to make a black nation in Africa. Let the government which owes us something provide a steamship line to Africa, and let us have cheap passage. There is no hope for the black race in the South."

GOVERNOR THEODORE ROOSEVELT recently delivered an address to twelve thousand persons at Ocean Grove, New Jersey, on "Practical Politics and Decent Politics." He said, in part:

"When I am addressing a body like this I naturally like to speak on the question of political life, for in a country such as ours the political life must in the long run correspond to the social and religious life.

"It is idle for the mass of good citizens to try to set themselves apart as not responsible for our political shortcomings. In the end the politicians must be exactly what the people allow them to be. They must represent the people—perhaps the vice, perhaps the virtue, perhaps the indifference of the people. This does not in the least excuse politicians that are bad, and we must keep in mind the fact that every vicious politician—above all every successful politician—tends to debauch public conscience, to render bad men bolder, and decent men who are not far-sighted more cynically indifferent than ever.

"But in blaming the politician do not forget that we are ourselves to blame for permitting his existence. Again, do not let us fall into the mistake of thinking that we shall ever make politics better by hysterics in any shape or form. Wild denunciation of all politicians, good and bad, is the very thing most advantageous to the bad politician, because such denunciation, being one half false, loses all practical effect, as it is impossible to separate the true from the false. In the same way a place second in infamy to the man who is dishonest in politics is occupied by the man who wrongfully accuses him who is honest of dishonesty.

"Again, avoid another form of hysterics. Do not trust to sudden uprightness, to sudden insurrections of virtue. Do not get into the habit of permitting things to drift from bad to worse, with the belief that you can always apply a revolutionary remedy. You might just as well expect to conduct a private business safely on such principles as to get a satisfactory government by their application in public life. Revolutions are sometimes necessary, but government by revolution is not a success.

"We have a right to demand from our good citizens that they apply themselves not intermittently, but steadily, to their public duties; that they make it their business to know how their public representatives stand and what they do, and that they keep our politics at a constantly high level. It ought to be true, but unfortunately it too often is not, that questions of morality should never be party questions. It is a shame to us as a nation that we should have tolerated for New York, for instance, an administration against which it is necessary to war, not on the grounds of political expediency, but on grounds of elementary morality. We never can have politics on a satisfactory basis in this country until we make it understood that dishonesty in a public servant is an unpardonable sin; that corruption of any kind will not be condoned for any consideration of party expediency. When it is thus understood that the first requisite of a public servant will be honesty, when we rule out once for all any system that is corrupt, then, and not till then, will we have the road free for our political development, for the fighting out of political issues on the proper plane.

"Now, this is decent politics, and, therefore, it is practical politics. But it is by no means all that there is of practical politics. It is not enough for you to do what is honest yourselves and insist upon honesty in others; it is not enough for you to act up to what you believe to be right. You have also got to possess courage, and, finally, you have got to possess common sense. Courage, because if there is one individual who is not entitled to exist in a community like ours it is the timid good man.

"In New York I firmly believe that the decent people could combine to overthrow the civic corruption if they only would; but, as a matter of fact, they are so apt to fight one another, so apt to quarrel as to exactly how high the ideal of their government shall be, that they too often throw the victory into the hands of those who have no ideal at all, and who in addition to a cynical belief in the power of corruption and in mere demagogy also set about their work with the practical common sense that you expect a man to show in managing his own business. As long as good men are mere visionaries they do not accomplish very much. Of course, they have got to have the good side of the visionary in them, or else they won't be good men. When a man ceases to strive to make manhood better, ceases to believe in a higher ideal and to endeavor to realize it so far as his own limited powers and the human frailty of those about him permit, why, he ceases to be useful at all. The one trait which of all others seems to me the least admirable in our national character is the tendency to deify mere smartness, mere success, without regard to whether the success is obtained by worthy or unworthy methods.

"Take Abraham Lincoln's words when he said that if he could not get the best, then he was going to get the best possible. Never be content with evil, never accept apologies for what is bad, but do not throw away the chance to get good merely because it is not the best that under ideal conditions could be obtained. Moreover, in politics remember especially that you want to mix with your fellows, and, above all, with the good men whose ideas of what is right and proper do not in all respects square with yourself. So far as you can respect their prejudices, and remember that you doubtless have a good many of your own of which you are entirely ignorant. Try to strike hands in the effort, and struggle to obtain what you both believe in instead of wrecking everything to the profit of the worst foes of both of you by quarreling over the points on which you cannot come to an agreement.

"The call for great heroism in an individual or in a nation does not often arise. If you wait for heroic days to come before you exert yourself you will simply be a drone, for it is in doing the little duties of the time that count most for good. Still, the need for heroism does now and then arise. Just at this moment the nation is face to face with a duty that calls for heroism. I mean our attitude in the Philippines. We put our pick into the rotten foundation of Spanish government both in the East and West Indies. We tumbled the building down in as righteous a war as was ever undertaken. Now, if we are worth our place among the great nations of the earth we must see to it that the ruins are cleared away and the temple of justice and honesty reared in their places.

"We shall be guilty of a terrible wrong to humanity if in the Philippines we retreat before armed savagery instead of organizing a suitable government which shall guarantee justice to every one and an ever-increasing measure of liberty to those who show themselves worthy of it. The whole history of the world shows that the wrong done by the mere sentimentalist is often of larger proportions and more elastic than any other kind of wrong, and of this wrong we shall be guilty if we fail to do our task thoroughly and well. It will call for but the merest fraction of our strength provided only we choose to exert that strength. If, however, the people let their representatives in Congress hamper the administration as they did last winter, when they refused to put the army on a proper footing as to size, permanence and organization, then the people have themselves to thank if the war lingers, with difficulties and dangers increased.

"What the people have to do is to resolve to back up the President to the full in seeing that the outburst of savagery is repressed once for all; to see that these new tropic islands in the East and West alike are not left to be the prey of partisans and spoilsmen, but are governed primarily in the interest of their inhabitants, and, therefore, ultimately for the honor and renown of America."

IN REPLYING to an address of welcome at Cliff Haven, New York, President McKinley recently said:

"Whatever the government of the United States has been able to accomplish since I last met you in this audience-chamber has been because the hearts of the people have been with the government of the United States. Our patriotism is neither sectional nor sectarian. We may differ in our political and religious beliefs, but we are united for country. Loyalty to the government is our national creed. We follow, all of us, one flag. It symbolizes our purposes and our aspirations; it represents what we believe and what we mean to maintain, and wherever it floats it is the flag of the free, the hope of the oppressed, and wherever it is assailed, at any sacrifice it will be carried to a triumphant peace.

"We have more flags here than we ever had before in evidence everywhere. I saw them carried by the little ones on your lawn, and as long as they carry these flags in their little hands there will be patriotism in their hearts. This flag now floats from the homes of millions; even from our places of worship it is seen, from our school-houses, from the shops and the factories, from the mining towns, and it waves from the camp of the pioneer, on the distant outpost, and on the lumberman's hut in the dense forest. It is found in the home of the humblest toiler, and what it represents is dear to his heart. Rebellion may delay, but it can never defeat its blessed mission of liberty and humanity."

The mission of our flag is the mission of liberty and humanity; wherever it floats it is the flag of the free, the hope of the oppressed; and wherever it is assailed, at any sacrifice it will be carried to a triumphant peace. This is the policy of the administration openly declared, and the hearts of the people are with it.

IN MR. CARLETON'S "Improvements In Wheat Culture," published by the Department of Agriculture, the selection of seed is treated as follows:

"Many experiments made in recent years show the advantage of using large and vigorous seed in growing various field and garden crops, but it is only lately that attention is being given to the use of such seed in wheat-growing. At present experiments are being made at several different places to test this point with reference to wheat, three grades of seed—small, medium and large—being used. Too much attention cannot be given to this subject. Many choice varieties have been developed by selecting from a field certain unusually good heads, planting the grains of these separately, and thereafter selecting the best each year. It has already been satisfactorily proved that the old idea that rust-shriveled grains give as good returns as large, healthy ones is erroneous. About the year 1876 a semi-hard red variety known as Grass wheat (probably an Odessa sort) became quite popular in northern Kansas, and was widely used for ten or twelve years thereafter. However, as the variety was adapted for either fall or spring sowing, and the spring-sown crop was always inferior to the fall-sown, the consequence was that two grades were produced from the one variety. As the fall-sown crop brought the better price it became the practice to sell all the winter wheat, and use the worst of the spring crop for fall seeding. It was claimed that this practice made no difference in the quality or quantity of the winter wheat, but about 1888 Grass wheat began losing favor among wheat-growers, having lost much of its original good quality, and finally gave place to Turkey, Fultz and other varieties. Now, there is no doubt that the deterioration of this variety was due, in great part at least, to the constant use of the inferior shriveled spring grain for fall seeding. Many other instances of the so-called 'running out' of varieties is probably due mostly to similar causes. However, even under the best treatment it is a pretty well established fact that certain varieties when introdnced into new localities will in time change quite materially in quality of grain. This is especially likely to be the case with hard northern sorts when transferred to warmer and moister southern latitudes. Probably the only remedy in such cases is to make an occasional fresh importation of seed.

"The matter of seed selection is of such vital importance that probably nothing would be of more benefit to the wheat-grower than the establishment of special small seed plats of say one to five acres from which to select seed each year. The following plan is recommended: At harvest-time cut from a good field a strip of the best portion, first eliminating all rye and other foreign heads and large weed-seeds. After threshing the wheat from this strip grade it by means of a fanning-mill with special sieves made for the purpose, so as to obtain only the largest and most vigorous grains. Use the best grade of wheat both for sowing the small plat and for the general crop the next season. The next year use none of the field crop for seed, but after grading the wheat from the small plat, as before, use very best of it for sowing the small plat, and all the remainder for sowing the large field, and so on from year to year. In this way seed is never taken from the general crop, which cannot be given the same care as the small plat, and there is a constant selection of seed, which is more and more rigid every year. Moreover, there is no extra labor involved except the small amount required for grading the seed each year."

Fruit Acids The following editorial paragraph which appeared in the last issue of the "California Fruit-Grower," under the caption "Fruid Acids Germicidal," has been a source of much satisfaction to me; namely, "It is not popularly known that fruit acids are germicidal. The juice of lemon and lime is as deadly to cholera germs as corrosive sublimate, or sulphur fumes, or formaldehyde, or any other disinfectant. It is so powerful a germicide that if the juice of one lemon or lime be squeezed into a glass of water that is then left standing ten or fifteen minutes the water will be disinfected; it makes little difference where the water has been obtained, or whether it has been boiled or filtered. This is a fact worth knowing, for any one in the vacation season may find himself under circumstances in which it is impossible to get water of known wholesomeness, or boiled or filtered water. In such a case the juice of a lemon or lime will purify the water perfectly."

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I can only hope that the "California Fruit-Grower" has good authority for these assertions. I was under the impression that medical practitioners, while generally believing in the germicidal power of lemon and lime juice, refuse to make any positive claim to that effect. I have never learned that the matter has been scientifically and systematically investigated. And yet for years I acted on the supposition and belief that fruit acids kill disease germs. I am convinced that typhoid-fever germs lurk in many wells, and for that reason have become afraid of well-water as a beverage, pure as it may appear, and good as it may be to the taste, unless either boiled or medicated. The medication has usually consisted of plenty of lemon-juice. It seems to me that this subject is very important. Why are our pathologists not trying (if they are not) to settle these points definitely? Does lemon-juice really kill typhoid germs, cholera bacilli, etc.? Is it necessary for the mixture of water and lemon-juice to stand ten or fifteen minutes before the work of germ-killing is accomplished? What other fruit-juices have the germicidal powers? Why should not the sharp acid of currants, for instance, be just as effective as lemon acid? How about the acid of the strawberry? I am especially interested in the question so far as it relates to currants, however. It is my favorite fruit. Nothing seems to be so gratifying to my taste and conducive to my general well-feeling just when recovering from a bilious attack than a generous dose of currant-juice. It seems refreshing, cooling and revivifying. We could make a delicious drink by adding a good lot of currant-juice to suspicious water. Will it make such water safe to drink? Ye solvers of medical mysteries, won't you crack these nuts for us?

* * *

The District School Farm papers are frequently advising their readers to take a greater interest in politics, to attend party caucuses, and make their influence felt in the selection of good candidates for local offices. That is right and good. I do wish that such advice would be acted on, for it would surely result in a great and needed improvement. But how can we expect farmers to look after politics and politicians when they seem to be so indifferent to things that touch them much closer home? I live in a rather large school district. It has a grade school employing two teachers, and paying out about one thousand dollars a year for teachers' wages. The regular attendance during about forty weeks a year is considerably over a hundred scholars. One should think that the people of a district which has to raise such a large sum of money by local taxation would watch the expenditures with jealous eye, especially since the proper schooling of their own children is also at stake. Yet at our last annual meeting only seven persons were present, and two or three of them had come only on special and even urgent invitation. Of all the many people in the district only four elected the trustee, the collector and treasurer, fixed the amount of money to be raised during the year, and in a large measure determined whether another year's school shall be good, bad or indifferent. And yet all this occurred after a great deal of fault-finding about the management of this same school and about the teachers, etc., and when it was thought that the whole district was stirred up to fever-heat about these matters. Voters who do not go to their party caucuses have no right to complain about the caliber of the candidates put in nomination by their party associates whom through being absent they refused to aid in the work of selecting the right man for offices, or hinder in their purpose of putting up unfit ones, as the case may be. If legal voters fail to attend the district-school meetings they have no right afterwards to complain of unnecessary expenditures, or of incompetency of the trustees, or of the poor school kept by the teachers hired by such trustees.

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Duty, Not Privilege We often talk and hear about the right of suffrage. People seem to have gotten the idea that to go to the polls and vote is a right which they are at liberty to exercise or not, as they may see fit. This to me appears like a grievous mistake. Every American citizen is a part of the government, and he cannot get rid of his share of responsibility for it. If he has any opinion of his own, any judgment, any discretion and common sense, his place is to use these endowments to the best advantage for the public good as well as for his own. He is in duty bound to aid in making the management of public affairs pure and good, and to help select and elect good men to office. He has no right to stay away from the caucuses and the polls. Suffrage, in short, is a right and privilege that puts also a good deal of responsibility on our shoulders. To look after school matters in the district, however, is a still more sacred duty which every father, every tax-payer is bound to perform. Shame on you people who are too indolent, too indifferent, to go to the school meeting, thinking you can shift the responsibility on three or four of your neighbors. The education of our children is at stake. Shame on you people who care nothing about that. It may be that the few who do attend and do the business are well-meaning and straightforward. In that case you have no right to put all the burden on their shoulders. But all the worse if those few in whose powers the district management is thus carelessly left or delivered are of the narrow-minded, selfish or corrupt kind of people. We have them in all communities, and much harm may be done.

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Bungling Bulletins One of my co-laborers in the journalistic field criticises certain farmers' bulletins issued by the Department of Agriculture. He says ("Practical Farmer"): "If the department wishes to issue hand-books of real value to the farmers and gardeners of the country, why do they not get them prepared by experts in the various lines, and not have mere compilations by gentlemen of the Department of Publication. Recently the department has issued a bulletin entitled 'The Vegetable Garden,' by Charles H. Greathouse, of the Division Publication. Mr. Greathouse carries after his name the degree of A.M., and we suppose this qualifies him to speak excathedra to gardeners. The letter of the transmittal from the chief of the division says 'there has long been a demand for information on gardening,' which this bulletin aims to supply. When one seeks information on any topic of importance to him, he usually goes to those who are supposed to know. The author of this little bulletin acknowledges that he is indebted to Mr. William Saunders, the veteran gardener of the department, for help in the preparation of the bulletin. Why did not the department get Mr. Saunders or some other expert to write a full treatise to supply the want they find so urgent, and not try a little amateur bulletin of twenty-four pages that amounts to very little for the ignorant gardener. There are numerous station bulletins already in print far better than this, and a reprint of one of these would have been a great deal better." This criticism seems to be well deserved, but it does not go far enough. In the first place, let me ask, is it the government's place to provide the farmers of the country with free text-books on gardening and fruit-growing when there are private publishers and authors who are offering just the books and guides needed at a reasonable price? Why will the government persist in running private enterprises by such unfair competition, just as Congress is doing a great injury to a large and important branch of the country's trade (the seed trade) by scattering tons of garden and field seeds free all over the country? Legitimate trade cannot compete with a big government that charges nothing for its goods, and makes the people as a whole pay the bill. This is not, or should not be, a paternal government. The help of the department should be directed mainly to let people stand on their own feet, not to support them. In the second place, it seems presumptious, nay, ridiculous, for some young man with two or three years' training in some college or experiment station, and with next to no practical experience, to set himself up as teacher and authority, largely in reliance on the suffix A.M. to his name, when it has taken us old war-horses a lifetime of practice and study to find some of these points that now serve us as guides in the same lines. And every year even now brings out new things, new short cuts to success, new suggestions. For myself I prefer writers with a long field practice. You should smell the soil in their writings. In those of the young A.M. you can only see study and training. That is not sufficient.

T. GREINER.

SALIENT FARM NOTES

Spring Chickens There are thousands of spring chickens now on the farms that are leggy, bony and light in weight. They have lived and grown up on what they could find and catch in the orchards and fields, and thousands of them will be sold just as they are. Since they left the coops with the old hens they have cost next to nothing, and if sold in their present condition they will not bring much. Buyers do not care for them, but take them at a slight discount to get others, while if they were fat they would be willing to pay a little above market price to get them. These thin, scraggy birds are now in splendid condition for fattening. They are strong and healthy, and their digestive organs are active and capable of digesting almost anything, and it is foolishness to put them on the market thin and light as they are.

* * *

They are now ready for finishing up, and if it is done right it can be done in a very short time, and the birds will fill up and round out like good Poland-China pigs. The best food to do this finishing with is corn, sound old or well-ripened new, and right now is the time to do the work and get rid of them. The quickest way to fatten a mature fowl is to pen or house it in a small place and give it all the corn, milk, water and grit it can dispose of; but we cannot take these thin, active youngsters out of the wide fields and shut them up to fatten. Instead of settling down and laying on fat they would spend their time running around their pen and yeaping to get out, and would not gain a pound. The way to manage these active fellows is to begin feeding them corn three times daily, not too heavily the first three or four days, and let them run at large. Soon as they learn that they can get three meals a day they will be on hand at the appointed time, and they should be filled up to the beak, and plenty of water and grit should be kept close by when they are fed. After filling up with corn they go straight to the water, and very often to the grit-box for a few bits to help grind the corn.

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In two or three weeks they will be fat enough for market, and will be just the kind of birds buyers like to get hold of—nice, large, fat and tender, such as dress well and bring the top price in the market. As soon as they are ready they should be sold. Don't hold them longer than necessary, because such heavily fed birds are liable to quickly become cloyed when fat and not gain an ounce, if they do not lose. Every well-informed farmer finishes up and rounds out his pigs with corn when he desires to market them. He knows that if they are taken right off the clover and marketed they are sold at a low price as "grassers." About three weeks on corn makes them solid and firm to the touch, and then they bring the top price. Chickens should be treated the same way, and in like manner they will bring the top price.

* * *

Crows in the Corn Yesterday a flock of crow-blackbirds, something over a thousand, alighted in the corn-field. After they had been there about fifteen minutes I cautiously slipped among them to see what they were doing. The first one I saw was standing on the end of an ear of corn and digging into it with his beak as hard as he could. The next was doing the same thing. Here and there about the field were sentinels perched on top of the highest stalks. In a few moments one of these observed me and uttered a peculiar "pa-a-ak," and instantly the whole flock arose with a roar. I fired my gun among them and they left the field. Going along the rows where they had been I found more than a thousand ears with a portion of the husk torn away and part of the grain, now in the milk stage, gouged out. Only those ears which stood upright were attacked, and they were torn and gouged sufficiently to let in the rain, and if we have much wet weather between now and cutting-time one fourth to one half of each of these ears will be rotten or sprouted. It is safe to say that during the twenty minutes that flock remained in the field they ruined or badly damaged not less than eight bushels of corn. What they actually eat counts for but little; the tearing of the husk so that the rain is admitted to the ear is where the real damage comes in. The only way to prevent it is to drive the birds from the field, and one or two shots from a gun will do it.

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Run Sweet Corn Through the Feed-cutter When sweet corn is nearly ripe milk-cows will often reject the lower portion of the stalks if fed to them whole. I run the stalks through a hand feed-cutter and cut them into pieces two or three inches long, and every piece is eaten. When whole stalks are fed there is always some loss through the cows throwing them out of the manger and trampling on them. Cutting prevents all of this, and as quite a bunch can be run through a cutter in a few minutes, it pays to do it. I have tried several kinds of hand-cutters and long ago decided that a strong, plain lever-cutter with a good hard steel knife is the best all-purpose cutter one can have about the barn. Corn-stalks, straw, hay and roots of all kinds can be cut into suitable lengths quite rapidly with it. To prevent waste by being thrown out of the mangers it is only necessary to cut to three or four inch lengths. Hay, sheaf-oats, straw or stalks and all that is not eaten makes first-class bedding for absorbing the liquids. My cutter cost only three dollars, and it has paid for itself every month I have used it. Ten minutes after I began to use it I took off the "gauge" (used to regulate the length of cut) and never put it on again, because I can do better and faster work without it. One day a healthy tramp came along and wanted something to do to earn his dinner. I told him he could cut a load of corn-fodder, just hauled in, to three-inch lengths. He did it in thirty-five minutes. He proved to be a working-man out of funds, so I gave him his dinner and fifty cents. He said he would be glad to cut fodder every day for a dollar a day. I gave another sixty cents and his dinner to cut enough to fill a shed seven by ten feet square and six feet high, and he did it in a little over three hours, then went to town and got drunk with the money. Keep the cutter-knife sharp and it will work easily and satisfactorily.

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Cutting Corn We must keep our eyes on the corn-fields if we desire to secure our fodder in the best condition. If one has much to cut I believe it pays to begin cutting a little early rather than to risk having some of it get a little too ripe or dry. I would begin cutting early and put it into smaller shocks. That cut later can be put into full-sized shocks. Here a full-sized shock is sixteen hills square, and if the corn is heavy it makes a rather large shock. If the corn is to be fed on the farm, cutting may begin as soon as the ear is glazed. When cut at this stage the grain will be apt to shrink a little and will probably be somewhat loose on the cob, but its feeding value will not be impaired in the least. If the grain is to be sold it is best not to cut until it has hardened. For feeding purposes the stalk is at its best just when the grain is glazed, and it is a good idea to cut at this stage all that is to be fed out at home.

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The lower end of the stalk contains so little nutriment that it is not worth handling, therefore it is advisable to cut at least a foot above the ground, and if the growth is rank and the stalks large and heavy, I would cut eighteen to twenty-four inches above the ground. By doing so one gets all of the stalk that is of value for feed, while he leaves the hard, woody, heavy part in the field. These long stumps can be smashed down with a heavy pole when the ground is frozen, and turned under next spring. If one has ten to forty acres of corn, he need not worry about any shortage in his hay crop, because well-cured corn-fodder is equal in feeding value to the best timothy.

FRED GRUNDY.

OUR FARM

FARM THEORY AND PRACTICE

THE YELLOW LOCUST.—This tree makes durable timber for fence-posts, and yet it is a fairly rapid grower. I find that it pays to devote some bluff or other piece of rough land to the locust, having the trees thick so that they incline to grow tall. The shading of the lower branches canses them to die and fall off, leaving long, straight trunks. As soon as the largest trees are fit for posts they can be culled out, leaving room for the growth of smaller stuff. Such a grove on land of little value may be a source of considerable income; or, if there be no market at hand, it provides at least the posts needed for the farm. The grove may be started from seeds or from sprouts. The only objection under some circumstances is the tendency of the locnst to spread, especially where the roots are disturbed or the timber is cut; but this can be kept nnder control. The young trees grown in thick groves do not make as long-lived posts as ripened trees, bnt they outlast most other kinds of timber and are so inexpensive that the farmer should grow them rather than bny the posts needed on the farm.

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LIVING POSTS.—Owners of stock-farms would find it a convenience to have a few young trees, like the maple, growing on the lines of permanent fences. Snch trees should be set at the corners of fields to serve as posts for wire fencing in the future, and a few trees set in hollows where otherwise posts would have to be anchored for wire fencing, and on steep or rocky points, save money, time and vexation of spirit when a new fence must be built. Years ago I set some trees on such land, and now find them a great convenience. When used as corner posts it is best to place a piece of rail between the wire and the body of the tree to prevent cntting the bark.

* * *

FARM LINES.—There have been no more fruitful sources of lawsuits between neighbors than farm lines. Landmarks become obliterated, and when a farm changes hands the new owner too often is in donbt about the exact location of the line, and tronble results. The means of prevention for all this is so simple that there is little excuse for losing the exact location of the line. Stones become displaced or lost and posts rot, but trees will stand for generations, and their stumps guide exactly in resetting other trees. Whenever the location of a line between two farms is not clearly and accurately marked, the owners should never leave it to become a matter of dispnte for their children or other snccessors, but should use whatever marks remain as a guide for setting a few line trees—one at each end of the line and an occasional one between if needed—that will fix the line for future years. It is by such simple means that much trouble may be averted in this world. A few men take the needed pains to establish landmarks while the work can be done with such accuracy that neither party can qnestion it; but many neglect the matter and bequeath to their heirs the conditions that make bad neighbors and costly lawsuits. There is no better landmark than a living tree. Its character is such that we must obey Solomon's injunction, "Remove not the ancient landmark, which thy fathers have set."

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SETTING FRUIT-TREES.—The nurseryman prefers to dispose of his stock of young trees in the fall, and therefore urges fall-setting of trees. Some of our best orchardists advocate spring-setting, although others find that they get just as good results from setting in the fall. I believe that the farmer who wants only a small orchard for home use does well to get his trees in the fall. provided he can trust his nurseryman to furnish stock that has well-ripened wood. In the spring he is too apt to neglect the whole matter in the rush of farm-work, while in the fall there is more time. He should take pride in getting one or two trees of each variety that does well in the locality, making sure of a succession of choice fruit throughout summer and fall, as well as securing a supply of winter varieties. I find it convenient to be able to do some grafting, as the best varieties of the neighborhood can be secured in this way. There are variations in all varieties, and a scion from a tree of known quality is much surer than a tree from a nursery. The tree should not be set much deeper than it stood in the nursery, and soil not too moist should be tramped very firmly upon the roots which have had all bruised rootlets trimmed off. Then some water may be given the tree before the remainder of the soil is put back, if the ground is very dry. The top should be severely pruned, often to a switch. A full supply of tree-fruits for a family is a luxury that is not expensive. Choice varieties are continually coming to the farmer's notice—not novelties, bnt varieties of known worth for the locality—and a few trees should be added to the home orchard every year.

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SHADE-TREES.—Many people expect to plant some trees near the home some day, but have an idea they should get only the so-called ornamental varieties; bnt that means expense and trouble, and the work is put off to some future time. For the farm home there is no more appropriate and beautiful tree than some of the most common forest varieties. A profusion of shrubbery around a house is an abomination. Shrubs should be set in a clump on a side that will not stop all circulation of air about the premises in hot weather, and some trees, trimmed high, should be used to cool the air that enters the house. A half-dozen maple-trees set on the south side of the house, and reduced to say three in number when size demands it, add much to the comfort and appearance of a home. Snch trees when they have attained a good size give an air of permanency to a home, and a well-kept sod of blue-grass beneath them makes an ideal place for rest in hot weather. Set such trees in the fall, marking their positions before removal so that the same side may be placed toward the south. If there is danger of sunburn the first summer after setting, protect the south side of the tree with a strip of light board tied to the trunk of the tree. A few of such trees on one side of the lawn, a few shrubs and flowers on another side, and grass kept short with a lawn-mower, make inexpensive and desirable surroundings for a farm-house. Set the trees this fall—forest varieties—and add ornamental features as time and money permit.

DAVID.

WHY SEED-CONTROL STATIONS ARE NEEDED

The fact is not as widely known as it should be that the Department of Agriculture has in successful operation one of the most complete systems for the inspection and germinating tests of seeds now in existence. The creation of this desirable section of departmental work arose from the fact that the adulteration of seeds and the sale of those of low vitality had become so general that the total amount of losses annually incurred was a serious tax upon the agricultural interests of the nation.

Seed-houses of long standing and honorable reputation have been much injured by reason of the sales made by disreputable firms. Bnyers of seeds, unlike those of most commodities, have, until the system of testing was introduced, been obliged to accept without question the various kinds of seed offered for sale.

If farmers would inform themselves as to the degree of purity and vitality which high-grade seeds should have, and then insist upon the seedsman guaranteeing his seeds to have a similar or at least a specified percentage of pure, vital seeds, they would find it expedient to supply these, and that, too, without adding much to the former prices.

The specific guarantee system of selling seeds is now very generally adopted in European countries, and has practically driven low-grade seeds from their markets. The honest and competent seedsman will agree to sell his seeds on their real merits, and will guarantee their purity and vitality under proper restrictions as to the method of testing and competency and disinterestedness of the tester. Seedsmen who will not do this are not worthy of patronage.

The busy farmer too often fails to examine the grains, grasses, forage or garden seeds that he purchases, to determine either their freedom from foul weed-seeds or their germinating quality. The resnlt of such indifference on the part of the purchaser is that expensive losses are incurred which could and should have been avoided by a little care. All purchasers of seeds are directly interested in their actual germinating power. Numerous causes affect their vitality. They may have been immature at the time of gathering, been improperly stored, subjected to the ravages of insects or otherwise injured. The only safe plan is to test their vitality before planting.

While practical farmers are fully aware that the character and quality of the seed used tends directly to govern the excellence and yield of the product, nevertheless the purchase of seed is too often delayed until the time for planting, when there is no time to learn its origin or to test its vitality. In snch cases the selection that is made is not based upon the individual merits of the seed, bnt upon its appearance only. The plan of purchasing seed a month or more in advance of the season for planting is the wisest one. This would allow of a microscopic examination and time to determine by a germinating test of a given number of seeds what proportion of the seed would grow.

The breeders of fine stock are fully aware that the profit from the business depends largely upon such careful breeding that the special merits of any named breed will be reproduced by judicious mating. Heretofore much more attention has been given to the selection of breeding animals from which flocks and herds are to be produced than is given to the seed of our most important crops. Neither plants nor animals are always exact reproductions of their immediate parents, but in the main do inherit and transmit the combined characteristics of their more remote ancestors in both male and female lines. For this reason it is of vital importance that the farmer should know as definitely as possible what are the inherited good and bad quality of the seeds he intends to plant. Without good seeds the most profitable resnlts cannot be secured, for however good the cultivation, it is partly thrown away by the use of imperfect seed. As well may one expect to get a thoroughbred animal from scrub stock. A plant as well as an animal mnst be both well fed and well bred to become what it should be. Pedigrees of desirable kinds and strains of seed are well worthy of record, and these should be carefnlly kept. Why should not seed be selected as much by the record as the character of the seed itself? The sowing of clean, good seed means a saving of mnch unnecessary labor. Why sow weed-seeds for the privilege of eradicating them, or plant those of low vitality and inferior quality to subsequently harvest a non-paying crop?

Not long since one of the leading wheat-growers in Maryland utterly failed in obtaining a good stand, as the germ of the grain had been destroyed in the field before the crop was threshed. The wheat was to all appearances in prime condition when procured for seeding, and no test of its germinating quality was deemed necessary. The little time that would have been required to test the vitality of the seed and to determine what per cent of the grains would grow readily and produce strong plants could not have been employed more advantageously. While it is true that the seeds grown upon the farm under ordinary conditions pertaining to the harvesting of them and their subseqnent care are rarely liable to be deficient in good germinating quality, yet in many sections of the country where sudden and extreme changes from heat to cold occur when the grain is in an unusually moist condition the germ is often greatly injured and not infrequently destroyed, notwithstanding its apparent perfect condition.

The use of shrunken or small seeds should be avoided. A small or undeveloped seed rarely possesses sufficient vitality to grow until the plant can assimilate the plant-food around it. Large, well-developed seeds are not subject to such conditions, and will continue to grow more rapidly than the others.

Seed-control stations are needed as much as those now established to prevent frauds in fertilizers, and the one which is now doing such excellent work in the Department of Agriculture should be duplicated in every state in the Union without unnecessary delay.

W. M. K.

FARM AND HOUSEHOLD HELP

The question of farm and household help is one of great importance, and year by year it becomes more difficult to solve the problem of securing reliable and efficient help.

When I first began on the farm I found it possible to get along with very little hired help, but as the various lines of industry upon the farm developed I found more help indispensable. Business demands, which called me from home more frequently, and the correspondence which comes from every state in the Union, requesting information on this, that or some other subject, make it out of the question for me to give to the work of the farm the attention that it formerly received.

Bnt it has been a very difficult matter to get reliable help. With some hands it seemed impossible to get work done with any degree of satisfaction, unless I went in person and did the major portion of the work myself. Some hands apparently make an effort to do as little work as possible without being discharged. Others apparently are unable to do a piece of work properly.

Years ago, when a farmer conld always count on being able to employ the son of some one of his neighbors to work for him during all of the year or some portion of it, he usually found his help pretty well edncated in all manner of farm-work, and willing and anxious to do his work in the most approved way; but now the one or two boys the farmer has are apt to go to the city to find employment, or if not, they are given an opportunity to work the home farm on shares, and thus the man who must employ farm help is compelled to look for help among that class who do not possess enongh ambition to do business for themselves. It is easy to see that if a man does not have any ambition to do business for himself that he is liable to be still less ambitious to do for others, and the labor performed by snch a one is always done in "a lick and a promise" manner.

I have been fortunate in employing my neighbors' sons quite frequently, and they have almost invariably been very satisfactory; but of late years, as neighbors' boys available for farm employment become more scarce, I have been compelled to depend more upon strangers. In some instances these strangers have been exceptionally good help, but in many instances they have been very disappointing. Their chief object appears to be to get their boarding and lodging and draw their wages.

About the same conditions govern honsehold help as govern farm help, with the exception that help for the house is much more difficult to find and more apt to be satisfactory when found. Until the last three years I could usually get neighbors' daughters, and these were well edncated in the performance of all kinds of honsehold duties. But neighbors' daughters available for domestic service are few and far between, and I have found it quite a task to find help.

One neighbor's danghter, who was with ns three years, became like one of my own children, and when getting presents for the children Myrtle was remembered along with the rest. She had learned our system of doing household work, and everything passed along nicely, and we had about come to think she would stay with us until she married and went to a home of her own. But her mother went into the poultry bnsiness and decided she would make use of her daughter at home. Then I began a search for another girl, but it was weeks before I found one. I told Mrs. S. one evening, after searching all day for a girl, that I had called upon more young ladies in one week than I had in all my single life. Finally a girl was found who promised to come. She proved to be a perfect jewel. She remained with us nine months, by which time she had secured an ample wardrobe for the first time in her life. But the fatal day came. I agreed to let her go home to help her stepmother clean honse. The parents, seeing she had ample clothing to last for a time, decided to keep her at home, and did so until she needed more clothing, when they permitted her to go ont for a few weeks at a time.

Wouldn't it be a good thing to import a ship-load of peasant girls from Europe? Many thousands of the poorer classes are compelled to go out and toil early and late at very heavy labor for very small pay. Were they in America they could get much better wages, good homes, benefits of society and education and not find life so full of burdensome toil as they now do. There are a score of families in this locality that would give good homes and wages to good girls. Should this article be read by any girl or woman who wants to give her faithful services in return for a permanent home and good wages, let her pack her trunk and come to Logan county, Ohio. Of conrse, she should bring good testimonials as to ability and character.

JOHN L. SHAWVER.

CATCH THEM BY THE HEAD

Set your steel trap in a corn-sack. Roll in the mouth of the sack until a space is left just large enough to contain the trap. The rat sees the ears of corn through the trap, and in reaching for them strikes the pedal with his nose. The trap is thus sprung so as to catch him just behind the ears, and his death is instantaneous. This is more humane than catching him by the leg and causing him to suffer all night. I have caught three successively in that way, and I believe it will prove successful in most cases. By the way, there is no surer way to rid the premises of rats than by using a sack partly filled with corn in the ear. You are sure of one abont every night until they are exterminated.

WALTER S. SMITH.

NOTES FROM GARDEN AND FIELD

BIRDS AND BERRIES.—For the first time since I have the June-berry under cultivation I have been able to save some of the fruit for canning. Heretofore the birds have taken the berries about as fast as they ripened. I am quite fond of the berry, but find the birds are not less so, and I cannot keep them away. It is not the English sparrow, either, that is doing the mischief. The depredators are mostly robins, and they take the berries pretty fast. I notice that a couple of barn-cats have also found out that the birds are frequent visitors in the June-berry patch, and they stay around and under the bnshes for hours at a time, watching for a chance to get hold of a winged and feathered victim as a welcome change from their usual diet, which consists of rats and mice. I do not interfere with either cat or bird, preferring to rely on the regulations of nature, which are calculated to maintain the proper balance. I like the feathered tribe well enough to be willing to divide my berries with them. The only thing that I object to is to have them take all the berries. There is only one way to get my share, and that is by planting largely enough so that the birds can take all they want and yet leave some for me. It is only since my bnshes (of which I have several dozen) are quite large and bear a good deal of fruit that I can get my share. Of course, if the cats kill a few of the birds it helps to increase my share. Most of the sweet cherries hereabouts were also taken by robins, cedar-birds, etc. We are sometimes tempted to assist the cats in maintaining that proper equilibrium in nature which secures to us our share of the fruit; but we do uot like to encourage our youngsters in using fire-arms on living creatures, so things are allowed to take their own course. I am not shedding tears over the poor birds that lose their lives by their natural enemies. Squirrels, crows, owls, hawks, etc., may be a blessing even as bird-eaters. They destroy the surplus, and thus have a mission in keeping up that proper balance I spoke of. Their work tends to give to us more of the cherries which the small birds have kept free from worms.

* * *

THE JUNE-BERRY.—It hardly admits of any doubt that the June-berry could be grown for profit. Extensive planting disposes of the danger from bird depredations. In a patch of even a few hundred large bushes we will not miss what the birds take. The plant is a never-failing and very prolific producer of berries. The fruit of selected plants is about as large as a small cherry. One trouble is their uneven ripening. It takes many pickings, and gives the birds too much of a chance by prolonging the season. In this respect the June-berry is just like the Crandall currant. The latter has proved during the past few years a free producer of large berries. These when ripe (jet-black) have a flavor reminding one of the cultivated common black currant. The birds, however, seem to like the Crandall flavor. At least they seem to take the berries just about as fast as these turn black. My bushes were again weighted down with a mass of fruit. I do not complain any more about their being barren as I did some years ago. When the first berries were ripening, and I saw how the plants were loaded down, I felt quite sure of having some to can this time. But I was doomed to experience the same disappointment as in former seasons. When I went to the patch, expecting to find lots of ripe berries, the bushes were nearly bare of fruit. The birds had enjoyed a feast right along. A portion of my June-berries when I picked them were not yet fully ripe. I see plainly that if I want any Crandall currants I must gather them a little green or plant a lot more bushes. I was quite anxious to test the flavor of the cooked or canned Crandall, but shall have to wait at least another year. Part of my June-berries I canned as they were; another portion I mixed with our common red currants. All look well in the cans. After awhile I shall know how they taste. The fruit of the June-berry in its general characteristics seems to resemble the high-bush huckleberry more than any other fruit. It has its size and general appearance. It also has that mild and unobtrusive flavor, and I believe it would take well in market if freely offered. The bush, like that of the Crandall currant, is easily increased by division of the rootstock. It also responds freely to good culture. All the plants I now have in my garden are the result of dividing a single large plant that had stood in sod and neglect for a number of years. What a thrift there is in the young plants in good garden soil! I am in hopes of seeing the plants grow so large that we will have to gather the fruit with ladders.

* * *

CULTIVATED HUCKLEBERRIES.—A single bush of the common high-bush huckleberry stands in a sodded spot in my garden. It has been repeatedly moved about, as it seemed to stand in the way in its previous situations. It has thrived and borne fruit year after year. The fruit seems to ripen more evenly (at one time) than that of the June-berry or Crandall currant. I might get it all in two or three pickings. The clusters were large and numerous. I believe that it is much more easily and cheaply gathered than the other fruits mentioned herein. The only thing that I am in doubt about is whether the bush is as easily grown and propagated as the June-berry. I rather think it is or can be made to. But what a shame to have neglected so good a fruit so long. I am going to turn over a new leaf. The plant, now quite large, will at once be taken up, divided and set in good garden soil to receive as good treatment as I now give to the June-berry. There is no doubt in my mind that the huckleberry deserves more attention, and that it can be subjected to cultivation with as much profit to the grower as any other of our common fruits. I would like to hear from those of our readers who may have huckleberry-plants under cultivation. I would also like to secure some plants, especially if they are of selected strains. Why should we not be able to produce huckleberries as large as cherries? They are much more easily grown, besides being so much more valuable.

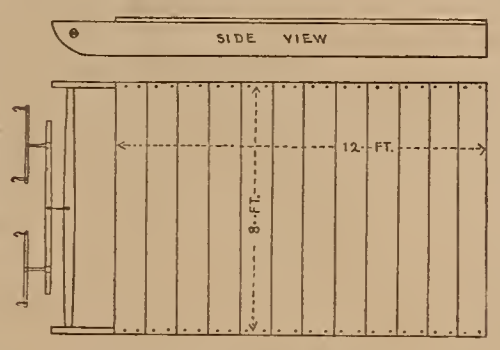
* * *

GATHERING FRUIT.—We are fortunate enough to have a basket-maker in this vicinity. When we need baskets, all we have to do is to tell him what we want, and he will soon turn out the goods as ordered. He has been making a lot of half-bushel baskets for me, rather strong and with strong handles, and these I use in gathering my pears. They also come handy for picking apples, if I intend to barrel the fruit. When the apples are found only scatteringly on the trees I prefer to shake them off into a canvas held underneath by four persons. It goes faster. I always do this when I sell the apples to canners by weight. Some people use a common grain-bag fastened to the shoulder. I always instruct my pickers to sort the fruit as they pick it. There is no use in putting worthless culls into the basket or sack. It takes more time and effort to carry this poor stuff around than it is worth. My instructions are to drop it to the ground. Then all the fruit in the basket can go in with the salable portion. If reasonable care is exercised in looking the fruit over as it is slowly poured from the picking-baskets into the crates or barrels the fruit in the packages on inspection will pass muster and please the customer. This is not a season of oversupply in good fruits. All fruit offered in our markets should bring a good price. But the year can easily be made a season of oversupply of poor fruit. We have plenty of apples that are hardly fit for cider-making. If we should put that stuff and other fruits of like quality into our markets, the whole fruit business would be demoralized to an extent as never before. In short, if we do not realize a profit on the little good fruit that we have this year, the fault will only lie with the greed of the grower. A person who once buys a basket of peaches as they are brought into the Buffalo markets from the vicinity of Ontario lake, in this county, and pays a good price for the same on the strength of the extra large and fine specimens which the grower has put on top of the basket, gets thoroughly disgusted when he empties the basket out at home and finds nothing but a lot of gnarly little bits of green things fit only for the dump-pile (but not even for hogs) in the bottom of the basket. I have had that experience myself, and have never bought another basket from that vicinity unless it was put up right under my personal inspection. Fruit-growers should learn that honesty is by a good deal the best and most profitable policy.

T. GREINER.

A PRUNING-BOAT

The pruning-boat is a handy, home-made necessity I noticed in a Washington orchard. It is used for hauling away the limbs and twigs cut from the fruit-trees to a convenient place, where they are burned. The boat is nothing more than a sled eight by twelve feet, with a platform of inch boards to receive the prunings. Three or four men with pruning-knives and saws cut the surplus limbs from two rows of trees at the same time, and throw them on the boat, to which a pair of horses is hitched. When a big brush-heap is made the branches are drawn away to the fire and consumed. This assists in ridding the orchard of insects and disease germs, and saves the work of collecting the prunings after an orchard has been trimmed. The boat may also be used as a barn-yard manure-sled, and for hauling hay and corn-fodder to the feeding-yards.



A PRUNING-BOAT

JOEL SHOMAKER.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

INQUIRIES ANSWERED

Resetting Red Raspberries.—W. W., St. Paul, Minn. Red raspberries do not need resetting so long as they grow and produce well. Some varieties, like the old Turner, will often fruit well for ten years in good situations, while others will need resetting in four or five years.

Planting Blackberry-bushes.—T. P. D., Harmanville, Pa. You had probably better transplant your blackberry-plants in the spring, but it may be done in autumn if the work is done with care. See reply and similar inquiry in this issue as to precautions necessary for success with fall setting.

Planting Blackberries.—J. J., Gabriel, Kan. Blackberries may be successfully set in the autumn if the soil is moist enough to work well, and if on the approach of winter each plant is banked up a little and is given a forkful of mulch of some sort. I like to set them in autumn, but beginners are apt to fail to do the work successfully.

Pear-trees From Sprouts.—J. D., Knox county, Mo. While it is possible to grow pear-trees from sprouts, yet as a rule it is too slow and uncertain a method, so most of our pears are grown by grafting or budding on seedlings. The Keiffer pear, however, is often grown from cuttings in the southern states. Where a good sprout comes up too near a pear-tree it may sometimes be saved to advantage if it is from a graft-root, and uot from the seedliug-root.

Strawberry Culture.—E. J. F., Collins Center, N. Y. Old strawberry-plants produce excellent crops of fruit if they are strong and vigorous. By cutting off the runners you develop very strong plants, and some varieties when so treated do their best; but as a rule the crop is somewhat less from an equal area of them than from matted rows, but it is generally of better quality. There is little choice as to farm manures for strawberries. Perhaps half-rotted cow manure would be preferred by many good growers.

Forest-tree Seedlings.—F. E. T., Waterville, Kan. The seed of soft-maple and elm should be gathered as soon as they fall (June) and be sown at once in good land in rows about three feet apart, sowing about fifty seeds to the foot, covering one inch deep in the case of the maple and about half as deep in the case of the elm. Box-elder and ash seed should be gathered in autumn or during early winter, kept in a cool, dry shed covered with hay; or better yet, when small quantities are gathered, kept on the hard, dry ground covered with a box, and sown in early spring, as recommended for soft-maple.

Planting Red Raspberries.—I. C. H., Easton, Minn. Red raspberries may be safely moved at any time during autumn provided the soil is moist enough to work well, but especial care should be taken to press the soil firmly over the roots. In your section the work should be done the latter part of September or the first half of October. On the approach of winter they should be banked up a little, and each hill covered with a forkful of mulch. Treated in this way they will not bear a good crop next season, but will do far better than if moved in the spring. Of course, if you want fruit next season, the tops also should be protected.

Apple and Pear Trees Dying.—G. J. T., Alton, Iowa. Apple and pear trees die out in summer from various causes, the chief of which in your section is due to winter-killing this season. Last winter was one of the worst known in parts of Iowa, Illinois and Indiana in its effect on plant growth, and many trees have died out this year from injuries received at that time. But in some sections trees die from being injured by borers. For the first case there is no remedy; in the second case a close watch for the borers and their timely removal will prevent serious injury. Fire-blight also appears nearly every summer and kills out the new growth only, and sometimes large branches or the whole tree. The proper treatment for this consists in removing the injured branches early. It may be largely prevented by selecting varieties that are least liable to this disease, and by giving a good circulation of air. Nothing will be gained by putting on air-slaked lime now.

Nursery-grown Forest-trees.—W. H. D., Hollandale, Wis. Nursery-grown trees are superior to forest-grown trees only because of their having been grown in such a way that their roots are in a smaller space and more easily moved and the tops are better balanced. However, there is no trouble about successfully moving pines, etc., from the woods if the work is well done. The chief causes of failure in doing this is due to attempting trees of too large size, and to allowing the roots to get dry. It is safest not to try to move anything over three feet high, and smaller sizes are more certain. They should be dug early in the spring, before or just as growth starts, and much pains should be taken to prevent their roots from even appearing to be dry. They should be dug and immediately covered with wet moss or a wet cloth. I think you will do best with white and Norway pine and white and Norway spruce. These may all be found in the woods of Wisconsin, except Norway spruce, which is from Europe. The hemlock is apt to fail in your section except on moist soil. The red cedar is the hardiest evergreen we have.

Apple-leaf Rust.—M. P., Springdale, Ark. The apple-leaf you send is injured by a well-known disease of the apple known by the name of apple-leaf rust (Gymnosporangium macropus). It is very injurious to some varieties of the apple, causing the leaves to become covered with rust-like spots, and finally destroying them. The life-history of this disease is very peculiar. The spores produced by the rust on the apple will not grow on the apple, but on the red cedar, where they produce the swellings and the scarlet pulpy mass known as cedar-apples. These cedar-apples produce spores which grow on the apple-trees, as in your case, and whenever they are infected several little openings occur on the under side of the leaf, with a row of bristles turned back around the edges which can be readily seen when examined with a low-power pocket-lens. This disease can only occur where red cedar is near by. Some varieties are not much subject to it, and it may be largely avoided by growing only those that have good resistant qualities. Where red cedar is not very numerous in the neighborhood it may sometimes be practicable to stop the disease by cutting them out or by removing the cedar-apples.

Pear-tree of Weeping-willow Growth.—W. E. D., Elizabeth, N. C., writes: "I have a Vermont Beauty pear-tree about five years old. The body is about four inches in diameter, and it is about twenty feet high. It has never borne or bloomed. I have been looking forward to its bearing with anxiety, and admire the tree and location, but, alas, I am in trouble over it. The branches have grown so long, and it has run up at the top so high that the limbs seem weak and have bent over like a weeping-willow tree, which makes it unsightly, and the limbs or branches are in the way in passing near it, though it has been pruned up high. I wish some one would be kind enough to tell me what to do with it to make it grow right."

REPLY:—Your pear-tree has a form peculiar to itself like all other varieties of pear, and you will have hard work to make an upright tree of it, for it is not that kind. If, however, it is too sprawling, severe pruning in early spring will make it start a strong, quick growth by which its form may be somewhat changed. But do not allow too many shoots to start. Pinch out the weak ones. It should be more generally known that there are hardly two varieties of pear, apple and other fruits that are alike in form of tree. Some are upright growers and what the nurserymen call ideal trees, while others are sprawling growers, and the nurserymen are puzzled to make them of salable shape. And yet some of the crooked growers produce most desirable fruit. The demand for straight, upright trees of all kinds cannot be met by the nurserymen, and for that reason they do not grow some of the best varieties.

THE POULTRY-YARD

Conducted by P. H. JACOBS,
HAMMONTON, NEW JERSEY

NATURAL METHODS OF INCUBATION

THE usual mistake in artificial incubation with some is economy by the saving of necessary labor. It may be claimed that it is impossible to improve, as we cannot excel nature. When we apply the word "nature" to animal and vegetable life in a strict sense it means contention, strife, war and destruction. Turn over the soil, and various weeds and grasses will make their appearance. One variety after another will be smothered ont, until one of the strongest varieties will prevail. Had the human family always lived up to the laws of health, we would no doubt live to a much greater age than we do now. Men follow the dictates of their passions, appetites and the inclination of their thoughts. It is their nature to do so, and it shortens their lives. It is the nature of wild animals to destroy one another. Regardless of the natural enemies of a hen (vermin), a hen appears at times to have no idea of cleanliness and health. If she exhibits her nature in a contest for her nest, though she may break every egg, she will be just as contented in the muss on the broken shells as though nothing had happened. The outside eggs frequently become chilled or rolled out of the nest; she never removes unsound eggs and is more or less careless about turning them. Though she may be persistent in her natural duties, she never can improve her chicks by her mode of incubation. Birds can be improved by artificial incubation by observing the laws of science and philosophy. With the use of incnbators and brooders more care can be given, and human reason supplants the instinct of the bird which has been domesticated. Economy, or the saving of labor, is responsible for many failures in artificial incubation.

YELLOW LEGS AND SKIN

The preference in some markets is for a fowl with yellow legs and skin, because it appears fat; but in England the Dorking, which has flesh-colored or white legs, is preferred, while in France the Houdan and other dark-legged fowls are given the preference. But the English and French have a certain mark that enables them to distinguish the Dorking and Houdan, even when dressed and hung up for sale. It is that both breeds have five toes on each foot. They will know that when a carcass has the extra toe on each foot that the dead bird was a Dorking or Houdan, or a cross therefrom; and as both breeds possess compact bodies with a small proportion of offal, they select for such and pay but little attention to the color of the legs and skin. In this country the dark legs of the Hondan seem to condemn it as inferior, and the same is true of the Langshan, which has dark legs and white, thin skin, yet there is no breed superior to them for the table. Not only are they excellent table-fowls, but a cross of the Houdan cock and Langshan hen makes a good layer—one that is not easily surpassed. The best mode of getting over the difficulty is to cross the hens so produced with a Plymouth Rock or Wyandotte, which will give the yellow legs and skin to the chicks and combine the good qualities of all the breeds used. Do not cross any breeds, however, if it can be avoided, as crossing soon carries one over to the use of mixed breeds and common fowls altogether.

PIGEONS

Pigeons sometimes do as much injury as the benefit conferred, as they fly away from home and bring diseases. They destroy a great many insects, and though fond of seeds, never disturb the plants after they have started. Even during the season when the seeds cannot be injured they keep busy hunting for insects, as they begin with a new brood almost as soon as the previous one is fledged. Old pigeons are not sought, but the squabs are delicacies and bring good prices. In proportion to cost, pigeons are very profitable. One objection to pigeons that fly over neighboring farms is that they cause annoyance and become subjects of complaint, hence they should be confined in properly constructed wire yards.

NON-SITTING BREEDS

A pen composed of a number of White Leghorns, Black Minorcas, Langshans and some crosses were fed a morning mash of bran and ground corn and oats, with a liberal supply of meat scraps. At night they received corn, wheat and oats. They were given all they would eat, with the desire to fatten them without placing them in the danger of becoming overfat. The first effect was heavy laying, and then followed the broody fever, first with cross-breds, then with the Langshans, then with the Minorcas, and lastly the Leghorns. In each case the birds were very fat. It might also be said that when the experiments were made it was with very little hope for the correctness of the theory that there were no non-sitters, but upon weighing those birds that did not show a tendency to sit a loss of weight was fonnd in each case. For instance, the first Minorca hen that wished to sit weighed seven pounds, while the weight of those that showed no desire to incubate did not average over six pounds. Of course there may be exceptions to the theory, just as there are exceptions to all rules, but the fact has been fairly proven that, taken as a rnle, a hen only gets the desire to sit when she has laid a certain number of eggs and in the meantime has taken on more than the necessary amount of flesh. The experiment certainly demonstrates the fact that there is no such thing as an absolutely non-sitting breed, but that all hens can be brought to the proper condition to become broody.

THE BREEDERS OF PURE BREEDS

The common supposition is that "fancy" breeders are not cautious sometimes; but this is a delusion, as no class of persons is more honorable than the breeders of ponltry. The majority of the complaints come from those who do not understand the points of the breeds, and who also expect eggs to hatch under all conditions simply because the prices paid were above those asked in the stores. Many purchasers do not know that chicks from black parents often have white on them at first, and the breeder is at once classed as a swindler should such occur, while others are not aware of the fact that out of every one hundred birds raised only one tenth will be fit for the show-room. The breeders have so many obstacles to contend against that many of them will not sell eggs at all, and they approve of the action whenever a swindler is detected and exposed.

DESTROYING VERMIN

Do not try to poison rats until you first bait them. To do so place choice food where they can get it. After awhile they will cease to be suspicious and will anticipate the regular time for feeding. After they have found out that you are their best friend, go to a drug-store and get some phosphorous paste. Give them a double mess of food with the phosphorous paste well mixed in, and the chances are that you will kill every one in the neighborhood. Lice, however, must be fought at all times, as they multiply rapidly, and delay is in their favor.

NOTES FROM CORRESPONDENCE

STRETCHING POULTRY-NETTING.—Common poultry-netting needs no special tool to stretch it. I like small posts, set firmly, with board at bottom. Drive a nail in each post, on a line and as high from the board as the width of the netting. Hang the netting on the nails, fasten one end and work from it. Straighten with the hands, pull the top wire straight from post to post if required with a small stick through the netting, and pry on a post. It won't need much but patience. Then pull down the bottom and fasten to the board enough to make it smooth and flat. A. M. S.
Plummers, Fla.

PROFIT FOR FOUR MONTHS—I have been a reader of your valuable paper for many years, and have read it all with interest, especially the poultry department, as I am much interested in poultry. I often see accounts of profits made of so and so many fowls, so I thought I would send in a record of my chicken-egg profit also of last winter. I kept a flock of thirty hens; the month of January I got 406 eggs; in February 295; in March 486; April 387, with prices ranging up to twenty-five cents a dozen. My net profit was $20.07.

[CONCLUDED ON PAGE 7 OF THIS ISSUE]

[CONTINUED FROM SIXTH PAGE]

Last year I had one turkey-hen, and raised twenty turkeys. I sold eighteen of them, and their weight ranged from twelve to twenty-two pounds. My net profit was $26.35. MRS. L. A. T.
Kilmarnock, Virginia.

COST OF PLYMOUTH ROCKS.—I wish to state for the benefit of subscribers that my Plymouth Rocks, Barred, White and Buff, and my feeding has cost, since January 1st, $8.95 for twenty eight chickens, as follows: Bran, 200 pounds, at sixty cents, $1.20; wheat-screenings, 400 pounds at fifty cents, $2; wheat, chopped, 50 pounds at fifty cents, fifty cents; corn, chopped, 80 pounds at fifty cents, fifty cents; bone, cut, 100 pounds at $1.50, $1.50; oyster-shell, crushed, 100 pounds at $1.25. $1.25; two bushels of rye at sixty cents, $1.20; two bushels of oats, at forty cents, eighty cents; making a total of $8.95, with six weeks feed on hand. I have a very great success with eggs. I should have included the feeding of forty chicks for fifty days in my number of chickens.
Louisa, Ky. H. G. B.

POULTRY-NETTING.—I will answer H. J. G. on putting up poultry-netting, and will say that the only way to make a clean job is as follows: First put your posts eight feet apart, then nail stringers (I use common fencing boards), one at the top and one at the bottom, to correspond with the width of the netting. This being done you will stretch the upper cable and staple every twelve inches. Next you will stretch the lower cable. At this point you will need more tools. Have your blacksmith make a hook with a link in the end, all being four inches long, out of three-eighth-inch iron. You will then need a three-eighth-inch rod two feet long for a lever. Place the hook in the lower cable. Place the rod through the link and under the lower stringer and press down to the proper place, being careful not to draw the mesh out of shape. Take short hitches and staple well and your fence will not buckle. For chickens place one or two smooth wires on posts over this. U. G. S.
High Point, Mo.

TWO-YEARS' RECORD.—Seeing several reports in the FARM AND FIRESIDE of receipts from poultry-raising I give my experience for the two years of 1889 and 1890. On January 1, 1889, I began with twenty-four hens and three roosters, Plymouth Rocks (I find them the best for general purpose), and four turkeys, one of them a male. I bought a two-hundred-egg incubator, and made a brooder at a cost of $34.85, and I valued my stock at $12. My expenses for 1889 besides those named were $40.02. My receipts from all sources in the poultry line were $70.13, leaving me in debt $4.74. But deducting the cost of incubator and brooder I think I did fairly well, as I gained experience that was worth considerable, as the account of 1890 will show. I also bought a small stove, to be used in the business, at a cost of $3.50, and thirty-five dozen eggs, as I lacked hens to lay enough. On January 1, 1890, I valued my stock at $26. I kept no record of the number, as I usually valued chickens at twenty-five cents and turkeys at one dollar. There were probably eighty-four hens and roosters and four turkeys as the year before. The expenses in 1890 amounted to $34.71, including the $4.74 brought forward from 1889. The receipts were $124.66, leaving me a handsome profit of $89.95. The poultry had free range, picking up a large part of their living. I charged the poultry with every item of expense, but gave them credit at ruling prices for everything used except eggs for the table. But I will add that I have never been able to do so well since. J. E. B.
Rosedale, Ill.

INQUIRIES ANSWERED

Picking Broilers.—A. T., Globe Village, Me., writes: "I wish the quickest process for picking chicks instead of picking them dry."

REPLY:—Scald them, and after the feathers are removed immerse the carcasses in ice-cold water for four or five hours, or longer.

Chicks Dying.—C. M., White Hall, Mich., writes: "A neighbor and myself had some chicks about three weeks old to die of no noticeable disease. They were fed according to instructions and were kept clean. Can you assign a cause?"

REPLY:—Full details should have been given. The loss is probably due to lice, mainly the large lice on the head and necks.

Preserving Meat.—E. E. S., Canon City, Colo., writes: "How can I best preserve a supply of several hundred pounds of meat so as to feed it out to a flock of a hundred hens?"

REPLY:—Put the meat in a box having a top (an old trunk is excellent), and for every twenty pounds of meat burn one half an ounce of sulphur, closing the lid and allowing it to remain closed half an hour. The meat will keep several months.

Overfeeding.—L. R., Stever, N. J., writes: "What ails my hens? They go on the nest, stay long enough to lay, come off and cackle, but do not lay. I have looked for lice, but cannot find any. Some droop around and appear sick. They are in good condition, and run at large. I have not lost any this year, but last year I lost half of my fowls. Their droppings are of a light color."

REPLY:—The fowls are probably overfed and in a very fat condition.

Incubators.—M. M. B., Long Pine, Neb., writes: "1. Are incubators a success? 2. Which kind is preferred—hot water or hot air? 3. Would it be advisable to have the brooder combined with the incubator? 4. Would a dry cellar be suitable for chicks for a short time?"

REPLY:—1. Yes. 2. There is no preference; both do good work. 3. It is better to have them separate. 4. If well lighted and dry it will answer for a week or ten days, but a cellar is not the proper place to raise chicks.

THE BOY ON THE FARM

No. 1

When one picks up an agricultural paper he will always find some article telling how to raise a better horse, cow, sheep, hen or hog; but seldom can he find anything that tells how to better the condition of that animal found on every farm that is stocked as it should be—the boy. Isn't the boy entitled to as much attention and consideration as the horse or pig?

The farmer's son has for years been the butt of newspaper jokes, and when any one wants to make fun of another fellow he calls him "farmer" or tells him he doesn't know enough to be a farmer. Many people honestly think that the fact of the boy having passed the first years of his life on a farm has dulled his intellect and caused him to be inferior in every way to the boy of every other station. Some may say that I am putting the matter too strongly, but I believe it is no exaggeration to say that more fun is made of the farmer and his son than any other class in the world. No matter how unjust this is, it naturally has its effect upon the boy of the farm. Every boy has pride, although he may try to make people think he does not care, and no boy likes to feel that he is inferior to all other boys. As a general rule, the boys either feel that they are handicapped by an insurmountable misfortune at the outset of life which they cannot overcome, or they determine to get off the farm as soon as they find it convenient, no matter where they go or what they do.

Both classes of boys have taken the view which is entirely wrong. There are reasons, the very best, why no farmer's son should adopt either of these courses. I will point out to the boy of the farm specific things he can do to better his condition, to show the people that the generally accepted idea is wrong, and make the boy better satisfied with himself and his position in life.

No class of laborers have to work so many hours for so small wages as do those who work on farms. This has been another great incentive of the desire of young men to get away from the farms; but if they will investigate all sides of the question they will find that the real condition is not as it appears to one who accepts general reports without study and comparison.

With business conditions as they are today, only those with business or intellectual ability above the average can command large salaries. But few of us can hope to get large sums of money for our work, and when we fairly understand the condition we often find our present situation much better in comparison than we had before supposed.

I shall not undertake to show how the boy can get off the farm into some other business, but I will suggest ways by which, while working on the farm, he may improve himself so that he will feel that he is the equal of other boys in other business, and will be preparing himself so that he may develop what natural ability he has, and make the most of himself under the circumstances. If he has that in him which makes him fitted for some other business or some profession, when the right time comes he can begin his specific preparation for his new career upon the foundation gained while on the farm. And there are many reasons why the farm is the best place for the boy in the first years of his life.

My suggestions will be to the boys direct, things for them to do themselves, and not suggestions to parents. Boys like to get things first hand, and I want to talk directly to them through the columns of a paper read by the farmer and his whole family.

GENE Z. FIZZLE.

A PROMINENT NEGRO AGRICULTURIST

South Carolina is truly proud of Professor J. W. Hoffman, of the State Colored College, Orangeburg, S. C. He received his education in some of the leading universities of this country. Professor Hoffman is recognized in this country and in Europe as one of the foremost negro scientists of the world. His specialty is along the lines of agricultural biology and dairying. He is a very close student and a born teacher. He first came before the scientific public in 1891, by reading a paper before the Michigan Biological Society at its meeting in Albion, Mich. He was the first negro to introduce among his people of the South the study of scientific dairying. He introduced into the South the methods of ripening cream by inoculating it with selected bacteria. He was the first scientist, while a professor at Tuskegee Institute, of Alabama, to report to the United States Department of Agriculture the appearance on the fruit-trees of the South of the San Jose scale, and to trace out its methods of introduction into the Gulf states.

He was appointed, while in Alabama, a "special agent" by the United States Department of Agriculture, to make a careful dietery study of the "nutritive value, the kind, quality and quantity" of the food used by the negroes of the "great black belt of the South." This work required much time and study, and was published by the United States Department of Agriculture as a very valuable scientific document and classed among the important dietetic studies of the different races of the world.

Professor Hoffman has delivered addresses before learned societies in the United States and Canada, and is honored by membership in many associations both in this country and Europe. Professor Hoffman is doing a great work by solving the so-called "negro problem" in the very practical way of teaching the youths of his race the real value of science as it is related to agriculture and dairying. His talks along agricultural lines are published in the leading papers of this great South, and these "talks" are read by both white and colored farmers. In South Carolina he has given new life to practical agriculture among his people. The white people of the South feel proud of him, as the future of the South will depend greatly upon the training of her people along industrial lines, and especially in agriculture as urged by Professor Hoffman.

ROBERT W. BARNES.

SWEET CLOVER

The weed laws of several of the states, particularly those of Ohio, condemn sweet clover (Melilotus alba) and impose penalties where it is not cut down. An extended acquaintance with this plant leads me to the conclusion that it does not merit its bad name, but on the other hand deserves to be classed with our useful plants. In my experience it seldom enters gardens, orchards or fields, and when it does appear there is very easy to kill. It confines itself almost wholly to waste lands, particularly to heavy soils, being especially thrifty upon soil that other plants find difficulty in possessing. The northern beaches and the clay bluffs of Lake Erie (Canadian side) are for miles covered with this plant, which furnishes hundreds of pounds of honey to myriads of wild and domestic bees from five to eight weeks each summer. The banks and bordering hillsides of many of our streams are clothed abundantly with it. It is one of our best honey-plants, the quality produced being almost equal to the best white-clover honey.

Recently, however, it has been discovered to have other uses. From casual observation it was supposed to possess the power of improving heavy soils, and after two-years' experiment this was found to be the case. When the plants have produced seed the roots, which descend to a depth of three feet or more, die and soon decay, leaving a shrunken, spongy substance in their places. Through these partly filled tubes the surface water drains away into the deep subsoil, leaving the surface well drained even after a heavy rainfall.

In the experiments, which were conducted upon uniform soil, the different plots showed the following results: Undrained soil, too muddy and wet to be walked upon, water in pools upon the surface; where pea-vines grew the previous year, no water on the surface, but the soil very wet and sticky; where sweet clover had grown one year, soil wet but firm; where grown two years (long enough for the roots to penetrate the subsoil), the land compared favorably with a plot that had been tile-drained.

This plant, being a legume and provided with root tubercles, can gather nitrogen from the air, and by the decay of these underground parts and the tops, if they also be turned under, can materially improve the fertility of the soil in which it grows.

Abundant honey-producer and a good soil renovator and improver—surely attributes enough to elevate it above the weeds.

M. G. KAINS.

EXTRACTS FROM CORRESPONDENCE

FROM COLORADO.—Mesa county is a fine fruit country, and prospects are excellent. It has an abundance of water for irrigating. A $450,000 beet-sugar factory is now being built. Four thousand acres of beets are under cultivation, and the crop promises well. Arrangements are being talked of to have ten thousand acres of beets under cultivation next year. I think this the best county in the United States for one thousand families to emigrate to. The climate is exceptionally healthful. C. W. S.
Grand Junction, Col.

QUERIES

READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Getting Rid of Stumps.—E. C. P., Hanover, Ill., wants a liquid preparation for use in burning out stumps. Various things have been recommended, but they do not give satisfaction. Use a good stump-puller, or blow out the stumps with dynamite or other explosives made for the purpose.

Canning Corn.—R. J. H., Winthrop, Minn., writes: "You say, 'Cut the corn from the cob, and fill glass cans, jamming it down until the milk comes out and you cannot get more corn in the can.' How do you manage to press the corn down after it is in the can so that the milk comes out?"

REPLY:—That is easy. Take a spoon or wooden pestle, and press down the corn in the can.

Onion-sets.—E. E., Waupaca county, Wis., writes: "Some time ago we were promised an explanation regarding the raising and management of onion-sets, generally called 'bottom-sets.' With me they almost invariably run to seed instead of growing into a larger onion the second season. Will some one explain?"

REPLY BY T. GREINER:—The only difference is in the size of the bottom-sets. If they are large they are liable to produce seed-stalks instead of large bulbs. The best sets are small ones of less than common marble size. Or you can raise plants from seed in the greenhouse during winter, and transplant to open ground in early spring. These never go to seed.

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Garget and Bloody Milk.—E. V. C., Belview, Minn., and A. F. K., Graydon, W. Va. Please consult FARM AND FIRESIDE, August 1st.

Tumor in the Sheath of a Dog.—H. C. W., Mansfield, Mass. If the tumor is in the sheath get a veterinarian; let him narcotize the dog with a morphine injection (chloroform is somewhat dangerous to dogs) and then excise the tumor, which he can do inside of five minutes. The dog will never know that anything has happened.

Gives Milk From Only Three Teats.—W. J. L., Middleton, Wis. If your heifer gives milk from only three teats, and the fourth one is harren or dry, leave it alone and do not prick and irritate it with darning-needles or with any other tools, for if you do the probability is that the teat and quarter will become inflamed, and will cause you a great deal of trouble.

Chronic Diarrhea.—S. H. W., Keosauqua, Iowa. Chronic diarrhea may have various different causes, and without further information in regard to your case it is impossible to give you the desired information. In cattle and sheep particularly it is a very frequent symptom in the last and fatal stage of so-called cachectic diseases, tuberculosis in cattle and fatal worm diseases in sheep included, and in such cases, of course, a treatment is out of the question.

Epileptic or Epileptiform Fits.—E. H. A., Lockwood, Wash. Your cow, according to your description, has either epileptic or epileptiform fits. The former must be considered incurable. As to the latter the prognosis is a little more favorable, provided the causes—a great many widely differing causes have been accused—can be ascertained and can he removed. Such a case requires a careful investigatiou before anything can be done with any prospect of success.

Epizootic or Infectious Ophthalmia.—A. M., Lemont, Ill., and A. S., Dispatch, Kan. What you inquire about is probably epizootic or infectious ophthalmia, or ceratitis, a disease just now very prevalent among cattle, and even among horses, in many parts of the West. As long as the cornea does not ulcerate or become perforated the prognosis concerning final recovery and a restoration of the eyesight is not bad. Please consult FARM AND FIRESIDE of August 15th.

Premature Birth.—M. L. P., Macomb, Ill. That your cow produced last September a dead calf three weeks before her time was up, a premature birth caused by external violence, does not necessitate that she should never again carry a calf the full length of time. At any rate, since the cow is a very good one, as you say, I most decidedly advise you to risk it, and breed her again. It would be somewhat different if she had had an abortion, say two years in succession, for then the prospect of producing another live calf would, though not impossible, be rather slim.

Possibly Lung-worms.—S. H. M., Oriole, Ind. If your pigs show no other symptoms than those you mention, and have had access to places containing ditches or pools of stagnant water, they very likely suffer from lung-worms, and nothing can be done except to feed them sufficient quantities of nutritious food and to keep them away from any stagnant water. All those that lack strength and have a large number of lung-worms will die, while all that are sufficiently vigorous or harbor comparatively few lung-worms will pull through. It is one of those diseases much easier prevented than cured.

An Affection of the Throat.—J. S. T., Kingwood, W. Va. According to your description there are three probabilities concerning your calf. The difficulty of breathing, wheezing, coughing, etc., are either caused by tuberculosis in the sublaryngeal glands, a place in which that disease very often makes its first appearance in cattle, by a morbid growth in the laryngeal region, or by the presence of a foreign body in or near the larynx. Have the calf examined by a competent person, and then after the cause has been ascertained and it has been found that the same can be removed, have it done. If it cannot be removed a remedy is out of the question.

Inflamed Eyes.—R. W. T., Corning, Kan. All that can be learned from your inquiry is that your mare has inflamed eyes, but whether the seat of the morbid process is within the eye or only on the cornea and in the conjunctiva, whether it is periodical or any other ophthalmia cannot be decided by your statements, because you do not give a solitary symptom characteristic of any specific inflammation of the eyes. Hence I cannot answer your question. Possibly it may be that your mare is affected with the same epizootic ophthalmia just now prevalent in many parts of the country among cattle. See answer to "epizootic ophthalmia" in present issue.

Continually Passes Wind.—C. E. P., Lindale, Ohio. If your mare continually passes wind (intestinal gases) when driven give her two hours' rest after each meal before you hitch her up; avoid feeding her any food that has any tendency to ferment, and give her only such food as is perfectly sound and easy of digestion. In particular avoid any wilted or wilting grass and clover, grass that is rank and very juicy, any new hay and new grain, and then give with every meal a small pinch of salt. If you follow the advice just given I have no doubt you will soon witness some improvement, unless the cause is different and the mare has been severely damaged in giving birth to a colt; but you did not mention any such damage.

Chronic Diarrhea.—L. D., Desoto, Mo. I have my grave doubts whether any treatment prescribed without having examined the horse and ascertained all the conditions having any bearing upon the case will do any good in a case of indigestion and chronic diarrhea of three years' standing. In the first place, the existing morbid changes which cause the indigestion and the diarrhea must be determined or brought to light by a thorough examination, and this done a cure will be possible only if it is found that the existing morbid changes are such as can be reduced or be removed, which is rather doubtful. Therefore, if you desire to do something with any prospect of success I have to advise you to have the case thoroughly examined by a competent veterinarian.

Lame.—A. H., Central Bridge, N. Y. If your horse shows lameness when starting, and the lameness disappears after a mile or two of travel, it is very likely that the lameness is caused by spavin, and if the small "bunch" (enlargement) you speak of was on the median side of the hock-joint I would not hesitate to call it a case of spavin; but as you say it is on the outside, where a spavin enlargement or elevation—unless extending over the whole joint—very rarely makes its appearance, the enlargement either has nothing to do with the lameness, or the latter is caused by some other morbid process than spavin. Write again, and give a more accurate and detailed description, particularly of the peculiarities of the lameness, and the manner in which the foot of the lame leg is put down and raised.

Pericarditis.—B. E. P., Girty, Pa. Your cow without doubt died of pericarditis, probably of a traumatic character, notwithstanding that you do not say anything about the finding of a foreign body at the point of the heart or within the pericardium. You may have simply overlooked its presence. If a sharp or pointed foreign body, for instance, a nail, or something similar, is swallowed by a cow with her food, it usually passes without any obstruction into the paunch, and from there works its way slowly but surely forward and downward, first through the wall of the paunch, then through the diaphragm and through the lungs till it finally penetrates the pericardium, and then when the cow dies is usually found at the point of the heart. This journey of the foreign body is seldom completed in less than three or four weeks, and often requires a couple of months. Pericarditis in cattle, at least when terminating in death, is caused by such a foreign body in a vast majority of cases, and is not at all an infrequent disease in cows fed with dish-water and kitchen offal. I once found a whole table-knife in the pericardium of a cow. Of course, there is no remedy after the foreign body has once left the paunch, and before it has left that organ no diagnosis can be made, because the cow will not show any symptoms whatever.

Mange or Ringworm.—J. K. B., Huntsville, Ark. Notwithstanding the wide difference between mange and ringworm, it cannot be made out from your superficial description, which gives only a few symptoms observed in both diseases, and none characteristic of either, whether the disease of your calf was mange or very inveterate ringworm. If it was the latter, the first morbid changes very likely made their appearance on head or neck in the shape of roundish patches, presenting an appearance as if coated with dough-like scales. Both diseases are contagious, and can he cured only by external applications and by preventing at the same time any possibility of a reinfection. The morbid changes you found in the lungs at the post-mortem examination, consisting in considerable enlargement of one lobe and the presence of black (probably hemorrhagic) spots in both, will find a ready explanation if it is taken into consideration that the skin disease having spread over nearly the whole surface of the body very effectively prevented the performance of its physiological functions (perspiration, etc.,) and thus compelled the lungs to act as a substitute. No wonder, therefore, that the latter thus overburdened succumbed to morbid processes. Precisely the same thing, though very much sooner, would have happened if the physiological functions of the skin had been destroyed by covering the latter with a coat of paint, grease or varnish. The calf in such a case also would have died of suffocation. If the disease is ringworm—begins in sealy patches of a roundish form and presenting an appearance as if coated with dried particles of dough—paint these patches on your second calf, which, you say, is affected in the same way, once a day with tincture of iodine, but at the same time thoroughly clean and disinfect the premises where the calf is kept. For further information I have to refer you to the numerous answers about ringworm recently published in these columns.

A Fistula.—T. J. Y., Rochester, Kan. What you inquire about is evidently a fistula, and cannot be brought to healing until perfect drainage has been secured either by making a lower opening perfectly draining every part and possible pocket of the fistulous canal, or, according to circumstances, by splitting open the whole fistulous canal from top to bottom so that every part of it will be exposed to treatment, and can be suitably dressed. This done, all tissues that have lost their vitality or have become degenerated must be destroyed and he removed, either by means of suitable caustics or with the surgical knife, so that a clean fresh wound will remain, which will readily heal if kept aseptic and if suitably protected against external injurious influences. Although your animal is only a calf, I most decidedly advise you to have the operation performed and the subsequent treatment directed by a veterinarian if one is available. If there is not you will have to attempt the operation yourself, and if successful in that you may destroy the morbid tissues, according to circumstances, either with a concentrated solution of sulphate of copper in water, to be injected into the fistulous canal if a lower opening has been made, or with finely powdered sulphate of copper if the fistula has been split open. These applications must not be repeated any oftener than necessary. If the solution is used, three or four applications once or twice a day may be sufficient, and if the powder is chosen one application ought to be enough. After thus a clean wound has been produced, a dressing with absorbent cotton saturated with a three to five per cent solution of creolin or of carbolic acid in water, to be renewed at least twice a day—if a lower opening has been made the solution will have to be injected, and the openings must be kept very clean—will probably have the desired result.

Umbilical Hernia.—S. P. T., Carrol, Neb., and C. D. D., Olivet, S. D. An umbilical hernia can be easily and safely removed, even without leaving any perceptible trace or scar, by means of a surgical operation which every qualified veterinarian is able to perform. If no veterinarian is available the following instructions may possibly enable you to remove the hernia yourself and without the instruments required for the regular operation, but a puckering scar indicating its former presence will remain. First prepare the colt by withholding its feed for the last twenty-four hours preceding the operation, then for the operation throw the colt, tie its four feet together, roll the same on its back, place a bundle of straw previously prepared on each side of the same, and then by means of the rope with which the feet have been tied together have the latter sufficiently drawn up to keep the colt on its back and to give you room to get at the hernia. Then let an assistant take hold of the skin in the middle of the hernial sack, and raise it so that the contents will drop into the abdominal cavity. Meanwhile you make a double noose, a so-called castration noose, in the middle of a good, strong "waxed-end" previously made for that purpose by a shoemaker, ascertain that no intestines are in the hernial sack, slip your noose over the latter as close to the surface of the abdomen as you can, and then while your assistant raises the center of the hernial sack yet a little higher tighten your noose, see whether everything is all right and the noose is as close to the surface of the abdomen as possible, and if it is, draw the noose as tight as you can, make an additional knot in it, and let your colt rise after you have cut off the unused ends of your "waxed-end," for the operation is finished. After some time the hernial sack will drop off, and if you had your ligature tight enough no wound will exist, and nothing more will be required. Still, if a good veterinarian is available I advise you to let him perform the operation, for he having the necessary instruments will be able to apply a better method, and to do it in a neater way.

THE MAGIC OF LEAF RIVER

By Maude Morrison Huey

"Now, here's your ticket, pa, and don't forget to change cars at Howard City. You'd better buy a paper on the train, so you'll have somethin' to pass away the time. You know you have to lay over two hours. Here, let me straighten your tie; it's all hunched up."

Mrs. Jonathan Joyce stooped down and fixed her father's black neckscarf with nervous fingers. She was nearly a foot taller than the old man.

"As for the trouble you and Jonathan had over my shoes, forget all about it, do," she continued. "They wasn't worth fussin' over, but Jonathan's hot-headed."

"They wasn't worth mendin'," said the old man, with the stubborn wag of the head and unyielding accent of age. "No, they wasn't worth mendin'," he continued. "I told you so. They wasn't worth the wax-end it would 'a' took to hold 'em."

"Anyhow, they wasn't worth all the trouble they made," repeated the woman. "Don't go to holdin' it up 'gainst Jonathan, and remember, father, you're goin' to come and see us ever' time you feel like it. 'Tain't like bein' a long ways off."

The old man shook his head persistently and mumbled to himself.

"Ever'thing'll be nice there. You ain't no ide' how pretty it is, pa. I'd like livin' there myself. You'll be all taken up with it, I know. The grounds is all set out to posies, and you'll be a sight better off there than here. We have t' pinch here, and canive to get along; even have to wear old shoes." She said this with a little accent of reproof.

The old man moved away from her impatiently. He hobbled on his old crooked cane to the far end of the platform, then came hobbling back.

"There ain't no use makin' excuses," he said; "there ain't no use." And he drew his shaggy gray chin down with a jerk among the folds of the light-colored calico shirt his daughter had freshly ironed for this journey. "I'm old; that's the whole story in a nut-shell. I'm old and no good, so I'm bundled off to the Soldiers' Home. I've outlived my usefulness, that's the sum of the matter. Better tell the truth, Lorinda, not try to patch it up with lies. I'm real glad your ma's dead, Lorinda; yes, I am. Don't try to tell me the old man lies, daughter. There's no need of excuses."

He hobbled out to the track and looked for the coming train. He could see the curling smoke of it in the distance.

"That's the way it always is when a body outlives their usefulness," he mumbled to himself; "they're cast aside like them old shoes o' Lorinda's. Tell Jonathan," he said, coming back to where the woman stood, her bare, hard hands clasped nervously, and a pained expression in her eyes, "tell 'im I wish 'im much joy."

The train came steaming and puffing up to the platform. It stopped, and the brakeman called "All aboard!" The old man turned back with his hand on the railing and motioned to the woman to come close. His voice was still hard, but it was low.

"Lorinda," he said, "don't let it die out. Would you mind waterin' it, say once in two days, 'till it gits firm rooted? I want that white rose to blossom there for her. I'm afraid it'll die out 'thout it's 'tended." Then he clambered up to the door and passed inside and did not look back again.

Lorinda's hands were clinched till the nails were white. She thought of the little mound scarcely a year old that the rose-bush grew above, and baby Emmeline, taken away on her fifth birthday. She stood like one riveted to the spot till the train began to puff and pull past her and crept away down the track, leaving only a trail of smoke behind and a dull ache in her heart.

"Well, it's best, anyway," she mused. "He'll have comforts. It's best f'r him." Then she went around and untied the horses from the hitching-post.

Grandfather Jackson sat stiffly down upon one of the plush-covered car-seats and looked out of the window and felt the rhythmical sway and jerk of the great iron monster, the clanking of whose powerful jaws was bearing him relentlessly past each familiar landmark, although invisible hands seemed outstretched from even the grass of the fields, clinging to hold him.

"I'm too old t' patch shoes," he repeated, with pathetic stolidity, as the click-t-clack of passing rails grew oftener and louder. "I'm too old."

He leaned back against the cushioned rim of his seat and turned his face toward the window. On and on the train bore him. Field after field, a glorious blending of colors, whirled past and out of sight. He knew them all, and mechanically his lips named them as they passed—Dave Wheeler's field of prize rye, bending its long, silvery heads in the sun; Mr. Beecher's thrifty acres of young corn—"It's big 'nough to hide a rabbit this minute," he mused. "They say corn that's big 'nough to hide a rabbit by the Fourth of July is a promisin' piece."

Farm-house after farm-house came and went—homes where there was ever a ready chair for Grandfather Jackson.

"I believe in bein' neighborly," he said. "There ain't no harm done smokin' a friendly pipe with anybody." He wagged his head in an aggrieved way as he thought how his son-in-law, Jonathan Joyce, had called him "worse'n an old woman to gossip." "I don't care. I wouldn't be so close-mouthed and set up as Jonathan," persisted the old man. "S'pose I'd better 'a' set by in that stuffy, drafty shop patchin' shoes! There ain't nothin' worse f'r rheumatiz an' stiff j'ints. I'm seventy years old an' past," he muttered, bitterly. "Jest bundled off 'cause I'm too old to work."

He leaned his gray head over nearer the window.

"I've patched Jonathan's shoes twice this winter, an' bought all my terbaccy with patchin'-money from the neighbors, an' land knows how many times I've patched Lorinda's! The way she whittles holes in 'em beats me. When I was young the women-folks went barefooted to do their scuffin'. Seems 's if she's scuffed 'em faster since little Emmeline died. Seems 's if she's been harder on the old man since little Emmeline died," he repeated. "It's soured her disposition."

Then they came to the long line of willows that parted now and then to show the old man in the car-window a glimpse of the gurgling, crooked river that wriggled in and out among the brown trunks.

"There ain't no place that beats Leaf river f'r trout-fishin'," he mused. "They probably won't 'low fishin' there."

His hard hands closed tight about the knotty handle of his cane.

"Jonathan never had no luck fishin'," his thoughts kept on. "It used to rile him clean up t' see the fish makin' a bee-line f'r my hook, 's if they knowed. Specially trout." Grandfather Jackson chuckled a painful little chuckle that drifted out into a long-drawn breath and finally terminated in a half-sob.

Leaf river swept out of sight, and the last graceful willow waved good-by to the old man. He craned his neck to watch it as long as he could. The train whistled and they passed a crossing; then houses, a church-spire and a few lettered store-fronts whizzed past. The brakeman came in and called "Howard City," and the train began to slacken speed and then stopped. Here was where Grandfather Jackson was to change cars. He took his worn black valise, the lunch-box Lorinda had carefully tied with pink twine, and his every-day straw hat down from the parcel-basket, and went out.

The little town was not altogether strange. He had been there once, years ago, to a soldiers' reunion. He looked about for a friendly face as he stepped off on the little dusty platform, but there was only the sallow-faced ticket-agent with his black skull-cap and a cross-looking man holding fast to a timid little girl who had descended the steps before him.

He stopped a moment to study the glaring red poster that decorated the building's front, then went inside. It was a stuffy little waiting-room, with the ticket-window in one side and the water-tank with its delusive lettering in the corner, beguiling many a weary traveler to hover in vain expectancy about its rusty faucet. A wooden bench, painted brown, encircling the wall sufficed for seats. Grandfather Jackson scarcely dared trust his rheumatic figure to the sharp curves of it.

He went over to the window and looked up the narrow little street and read the signs that lettered the white store-fronts, and counted the teams tied along to the hitching-posts.

"That fur one looks like Dave Wheeler's sorrels," he mused.

Then he went over to the opposite window; that window looked toward Leaf river.

"'Tain't two miles up yunder," he reflected.

There was a wistful look in his eyes, and he tried to draw his chin into firm lines. He took a little tin box from his pocket and opened it and spilled a coiled-up fishing-line and a collection of hooks out into his hand. He counted the hooks, and dropped them, one by one, back into the box and uncoiled all the long length of line and coiled it anew more firmly. Then he shut the box and looked at the cover. It was adorned with a gum-picture, glued securely down—a stiff little bunch of white roses. She had given it to Grandfather Jackson, and had helped him fasten it on. He touched it with his knotty fingers and thought of a bare little mound where one tiny slip of a white-rose bush was planted. Would Lorinda forget to tend it?

Across the room sat the timid little girl, her tearful blue eyes riveted on the old man; a tiny mite in a faded pink calico dress and a dirty cotton hood much too small. When he turned around he saw her. She sat up stiff and straight on the bench, with her hands folded upon her lap and her short bare legs sticking out before her. Her little sun-burned cheeks were grimy with tears and dust.

"Poor little toad! poor little toad!" mused the old man. Something in the child's attitude touched his sympathetic heart. He watched her curiously. "She ain't much bigger'n little Emmeline was—not much," he mused.

The cross-looking man was walking back and forth on the platform outside. He came in and stooped over the little girl. She raised her eyes to him, fearfully.

"Tired?" he demanded.

The child shook her head.

"Hungry?"

The child looked wistful, but continued to answer in the negative.

"She's got grit," he muttered, as he straightened himself. "Well, you sit still; I'll be back after a little; I'm going up the street a bit."

He went out on the platform. The child's appealing eyes plead with Grandpa Jackson. He hobbled after the man. "I'll find out," he mused, with an old-wise shake of the head. "I'll find out."

The stranger had paused to look lazily up the street. The old man went close.

"Say, is that child yours, sir?" he questioned, with the innocence of old age. "I was thinkin' I'd like to give 'er a cooky if you didn't mind. They're home-made; my daughter Lorinda baked 'em fresh f'r my lunch. I've got more'n I need. 'Twon't hurt 'er."

The man laughed out loud.

"Hurt 'er? Well, I should say not. Give 'er all you want to. I don't s'pose she's had any too many."

"Did you say she was your'n?" persisted the old man, quizzically.

"Mine?" The stranger laughed again. "I should say not. She don't belong to any one that I can find, and nobody wants her. She'll belong to the state to-night, when I get her up to Cold Water. She's bound for the Orphans' Home."

Grandfather Jackson's breath came in sharp gasps. "Did you say you was bundlin' her off to the Orphans' Home?" he repeated, vaguely.

"That's the place. Great institution that. More than a hundred homeless waifs there now. This one's mother just died this spring. Her father's dead and her sister's dead."

"Yes, and little Emmeline's dead," finished Grandfather Jackson.

The stranger had moved away down the platform. He watched him a minute and then went inside. The child seemed pleased. She smiled faintly to see him. He went over and untied the pink twine that secured his lunch-box, and took one of Lorinda's raisin-cookies from the top. "She used t' call the raisins bugs," he mused. He took it close to where the child sat.

"Don't the little girl want one o' gran'pa's nice raisin-cookies?" he said, and held it out to her in his rough, horny hand, and smiled and nodded. "There, that's a lady, that's a lady," he encouraged her, as she reached up her hand shyly to take it. "Course all little girls like cookies."

He sat down and watched her eat it. "Thought so. Hungry's a bear, poor little toad!" he mused, with a satisfied nod.

She devoured the cooky to the very last bite, saving the raisin till the last. Grandfather chuckled to see that. "Jest like little Emmeline used to, f'r all the world," he mumbled. When she had finished he reached over and patted her pink frock sympathetically.

"The little girl ain't afraid o' gran'pa, is she? Jest come over here and set on gran'pa's knee and tell what your name is."

He drew her shrinking little body near and lifted it up.

"Don't weigh more'n a pint o' cider all drinked up," he said. "Now let me see; is it Jennie 'r Lily 'r Bessie 'r—it ain't Emmeline, is it?" he questioned.

She laughed. "No, it ain't; it's Daisy," she said.

Then he told her all about little Emmeline and the white-rose bush, and showed her the gum-picture on the cover of his tin box.

She looked sympathetic, and cuddled down on his arm. "How big was she?" she asked.

"Well, I should say she was jest about as big as you," he told her, thoughtfully. "Jest your size to a T." Then he told her about Lorinda's shoes and the Soldiers' Home. Lastly he told her about Leaf river. "Come on over here and I'll show you jest about where it is," he said. He led her over to the window and lifted her up. "See that green line 'way off 'g'in the sky?"

She nodded her head.

"It goes bubblin' an' talkin' to itself down there under the trees. It's so clear a little girl like you could jest see 'er pretty face in it. I've jest 'magined there's where fairies come t' comb their hair by moonlight."

The child lifted her wide eyes to him.

"It seems when I lay there on the grass an' shet my eyes I can hear 'em jest playin' harps an' singin' up among them willer-trees. Mebbe if we'd walk up there t' the top o' that hill yunder we could see the willers awavin'. Mebbe we could."

"And the fairies?" questioned the child.

"Yes; an' I shouldn't wonder if we'd find four-leaved clovers up there in the grass, t' wish by. Ever braid a clover-chain, little Daisy?"

She shook her head.

"Never did? Well, well! Come on; we'll go up this minute. Tell you what, we'll take our lunch, and we'll eat it up there by 'n' by."

They went out together, the old man and the little girl. It was not far, and a little gnarly maple spread a flickering shadow on the grass. Clovers were everywhere. They sat down side by side.

"Looky! Look 'way off yonder," said the old man. "We can see 'em wavin', sure enough!"

The child's eyes stared wonderingly. "Where's the fairies?" she said.

"Mebbe we ought to be a mite closter," reasoned Grandfather Jackson. "Say as fur as that big ellum over the fence. Fairies is powerful hard to see."

They went on until they came to the elm. The old man lifted her to his shoulder, that she might see better. There was only the silvery sheen of the distant willows and the blue haze of the skies.

"Mebbe we'd best try to find four-leaved clovers first, t' wish by," he suggested.

They sat down and searched through the grass, both equally eager. The little girl found the first one.

"See!" she cried. "See! Now what shall I do?"

"Now just put it up to your lips, and wish, and don't tell; and then pull each one of the four leaves and throw one to the north and one to the south and one to the east and one to the west, then your wish will come true, I shouldn't wonder," he explained.

She did as he directed. "Now mustn't I tell?" she questioned.

"No, for if you do the old witch-woman'll hear an' make a big wind come an' blow your leaves all away where the fairies can't find 'em."

The child laid her head over on grandfather's knee. "Tell me about the fairies," she said. "Why do they comb their hair by moonlight?"

"They sleep through the day," explained the old man. "They don't come out when the sun shines; they're afraid it'll burn their complexions," he chuckled, gaily.

"An' fairies sometimes comes an' carries people away off, don't they? Could they carry away a little girl as big as me?" The child looked at Grandfather Jackson wistfully. "Fairies won't never come 'there,'" she said, sadly.

His arms tightened about her. "Poor little toad! poor little toad!" he mumbled. "Fairies won't never come 'there' neither, dearie."

She clasped her arms about his knee. "Need we go?" she said.

He drew her up in his arms. "Shall gran'pa tell you all about a fairy named Silver Hair?" he asked. She listened, and he stroked her yellow hair and told her all about a tiny fairy who lived all her lifelong in the golden heart of a water-lily.

Her little form lay limp in Grandfather Jackson's lap. He watched her blue eyes close slowly. Then she opened them for a moment and put her arms about his neck. "Put your ear down," she said; "I'll whisper it jest to you. I wished a real, true fairy'd come an' carry me away an' hide me. I wished she'd take you, too, grandpa. Hide us both so we wouldn't have t' go." Her little arms fell down again and her eyes closed.

The old man's wrinkled hand stroked her red cheek. A little sigh escaped her sleeping lips. "Poor little chicken! poor little blessed lamb!" said the old man. He scarcely stirred lest he should waken her. When he held her fast asleep he looked about him restlessly. The little brown station was out of sight. To his right were the glaring roofs of the village, and to his left, away off there, were the willows. The roofs seemed repelling him, the willows seemed beckoning. He looked down at the little bare feet and thought of Lorinda's shoes; then he thought of an empty wooden crib in Lorinda's bedroom, and a tiny mound whose sod was not a year old.

The sleeping child's lips moved wearily. Grandfather Jackson listened. "Do you s'pose it'll come true? Will the fairies hide me?" she said.

Just then a train whistled in the distance. A look of anguish shot across the old man's face. He folded the little form to himself tenderly and staggered to his feet. He stood a moment looking about undecided, then he moved forward, but it was not toward the brown station.

"It shall come true, dearie," he whispered in her ear. "The fairies'll hide you an' gran'pa both. I see 'em beckonin'; yes, I see 'em. The fairies is goin' t' hide us, dearie." He trudged slowly along over the grassy roadside.

Lorinda put the fried ham and the warmed-up potatoes on the table; then she called Jonathan. They were having a late supper. Somehow things had gone wrong all day. Jonathan came stolidly in and took his place at the head of the table, and Lorinda sank down in her chair with a sigh, and began pouring the tea. Neither of them looked toward Grandfather Jackson's empty place, but both were painfully conscious of it.

There were two empty places at the table now—one where a little high chair had been drawn a year ago. They both saw, too, the wilted bouquet of wild pinks the old man brought in for the table the night before. Lorinda hadn't the heart to throw them out.

"I'm glad they have flowers there," she mused, bitterly. "He'd miss 'em."

After the chores were finished and the supper work cleared away Jonathan came in and sat down in his rocker, with his back to Grandfather Jackson's big cushioned one, and looked absently up and down the fashion column of their farm magazine.

Lorinda came in and took off her dish-apron and sat down in her little sewing-rocker and rocked. She hadn't any heart to read. She was too restless to sew. She glanced up at the old man's empty pipe on the clock-shelf, and flushed up to the roots of her hair when she saw Jonathan eyeing her.

"I was just wondering if you had wound the clock," she said.

How still it was in the great room! A dog down in the road whined dismally, and the wind moaned with a sad little sound in the elms outside. The squeak of Jonathan's rocker was almost unbearable. She stood it as long as she could.

"Do turn your chair straight, Jonathan," she said, impatiently. "It sets me on edge."

The big tabby-cat that had been Grandfather Jackson's pet came in and jumped up in his chair and looked about lonesomely. It went over and put its paws up in Lorinda's lap and mewed with questioning accent.

"Poor kitty!" she said, sympathetically; "poor kitty!" and reached out her hand to caress it. "Want some milk?" And the cat followed her into the kitchen.

She went and stood in the open door and watched the lightning-bugs flickering along the roadside.

"I wonder if he is content?" she mused, regretfully. She heard the bullfrogs croaking down in the hollow. "I wish I knew," her thoughts went on; then she heard the low rumble of wheels. The sound came nearer, and the fireflies flickered faster down the road. The sound ceased, and the horses were at the gate. Lorinda waited, and put her hand to her eyes trying to make out the figures that moved slowly up the path.

"Dave Wheeler, is that you?" she called. She thought the wheels had sounded familiar.

"Yes, it's me, Mis' Joyce."

"An' it's me," put in a quavering voice that set Lorinda's heart beating wildly.

"Father!" she cried; "not you, Father Jackson!" She strained her eyes through the darkness.

"Yes, me, Lorinda: an' here, here, I've got somethin' for ye, daughter!"

She had stepped out on the porch and held her arms forth gladly to welcome him.

"Shut y'r eyes, Lorinda! shut y'r eyes!" he cried, with childish excitement. "Hold y'r arms stidy now. There, now open 'em." He gave over the burden of Daisy's sleeping body, and the tired child's head fell over on the woman's bosom. "It's little Emmeline," he said; "I fetched little Emmeline!"

Lorinda's arms grew weak—so weak she almost let the child fall. "Father!" she gasped, then she clasped the little figure frantically and went inside.

Grandfather Jackson followed chuckling. "See how pleased she is! Didn't I know it would please 'er? Didn't I say 'twas jest a-losin' little Emmeline that had soured 'er disposition?"

"I found 'em both asleep like the two innocent babes they be," explained Dave Wheeler later. "You see, I jest stopped t' let my horses rest a bit in the shade of the willers down along Leaf river, and wandered down t' find a few sprays o' pep'mint f'r Nancy, when I stumbled right onto 'em an' took 'em in an' fetched 'em 'long home. The baby's slept all the way, an' gran'pa's held 'er in 'is arms lest the joltin' 'ud wake 'er."

"She's the pictur' o' little Emmeline, ain't she, daughter—just the very pictur'?" questioned Grandfather Jackson, when the story had been brokenly told. Lorinda sat in her little chair, holding the child tenderly and rocking with wet eyes. "See how yeller 'er hair is," said the old man.

Lorinda stooped and kissed the golden head passionately. It roused the little sleeper. She opened her blue eyes and looked up into the woman's face wonderingly. The pink lips parted, smiling.

"Oh, you're the fairy," she said. "You've come t' hide me, ain't you—me and gran'pa?" She closed her eyes again and snuggled down close to Lorinda's heaving breast.

"I'm goin' t' mend your shoes, Lorinda; I'm goin' t' mend 'em in the mornin'," said the old man.

THE CICADA

Ambushed assassin of the silences.
Where midmoons languish through midsummer's swoon,
While soft and low in drowsy monotone
The cricket pipes to crooning mantises,
Like jangling chords upon discordant keys,
Thy sudden dagger stabs the quiet noon
Till summer's soothing lullabies attune
Their rasping notes to thy hoarse cadences.
Hilarious bandit, animated sound,
The ebb and flow of breezy tidal waves,
Where all sweet thoughts harmonious are drowned,
And midges drone above their billowy graves,
To him whose soul is thrilled with joy like thine—
Both harmony and discord are divine.

—Edwin S. Hopkins, in The Sunny South.

THE STORY OF A CLAIM

BY ADELAIDE L. ROUSE

WE HAD it at last—the claim, I mean—or, rather, we had them, for Van and I each had one. We had so often pictured this moment during the claimless years spent in teaching in Chicago schools. Other women "took up land," and why shouldn't we? No more tired nerves, no more wire-pulling to keep our places—nothing but a free and easy life under our own vine and fig-tree, as Van was wont to say. The vine and fig-tree were yet to be planted, but Van always was imaginative.

Our claims are adjoining, and for safety and company we built our cabins very near the dividing-line, connecting them by a passageway, thus making one building of it. By this arrangement we could be together as much as we liked, yet we slept and lived on our own claims, in order not to cheat the great republic which was giving us our land for next to nothing.

There were two rooms on each side of the Shanty (we always spell it with a capital), which was a rude affair, guiltless of paint, with rude board shutters for protection. People told us that we would freeze to death if we stayed through the winter, but at present we had no intention of living on the claim more than the six months each year which the government demands.

Our goods had arrived at the Shanty before us, and such was the confusion that they seemed more numerous than they really were. It was too late to do any settling that night, so we ate some sardines and crackers, slung our hammocks like sailors, wrapped ourselves in blankets, and—fell asleep I wish I could add; but we didn't. I lay awake for several hours, and more than once I heard a little sob from Van's hammock, which told me that she was keeping me company.

I awoke with "a weight on my mind," as the old-fashioned folks say. I could not at first make out where I was till I saw Van poking around among the goods, looking for the coffee-pot. We had slept in my part of the Shanty that night, but I wish to affirm that afterward each one bunked on her own claim.

After we had fished the oil-stove from under the case which held the encyclopedia, we fried some bacon and made coffee. After breakfast, poor as it was, we felt more hopeful, and began to put the house in order. We were very busy for a few days putting up shelves, papering the rooms and arranging the lares and penates which had accumulated during the years we were teaching school. Sketches, rows of books, rugs, china, pillows and a couple of soft shaded lamps made the Shanty look quite homelike.

Our nearest neighbor, Jonas Payson, was two miles away. He and his wife, Em'ly Ann, were much interested in us, and we in turn were grateful for their friendliness. "Jone," as his wife called him, took us under his guardianship; he was our oracle, as Van said, and we asked his advice about all sorts of matters. Em'ly Ann, too, was of the utmost assistance to us in the management of our household affairs. She would come over whenever she could get away from the children, and sit with her sunbonnet on, talking like a cook-book, to quote Van again. If the truth were told, Em'ly Ann was amply repaid for her kindness to us by the fun she got out of witnessing our struggles with domestic affairs.

For safety Van and I had purchased two pairs of revolvers, and had practised shooting at a mark before leaving Chicago. When we first went to the Shanty we used to spend some time every day shooting at a target, to keep up our practice against the time when we should be besieged by tramps or Indians. As time went on, however, we grew less afraid of visitors and more weary of the loneliness. If ever two mortals got their fill of solitude, Van and I did that summer.

It was well that we had to be busy or we might have given up the claim and ignominiously gone back to Chicago to resume teaching the "young idea to shoot." Van did some gardening, raising what Jone called "sass"—lettuce, radishes and tomatoes. I had a brood of chickens for my special care, but most of them contracted the pip, and died. As for our farming, Jone did that for us. He talked encouragingly of the crops, but neither Van nor I knew what he had sowed or planted. The experiment was making large inroads into our savings, but we consoled ourselves by the thought that other women had made a success of taking a claim, and there was no reason why we should not do the same.

The evenings were the most lonely time. We couldn't go to bed as soon as the supper-dishes were washed, and we couldn't sit staring at each other. So we brushed up some of our almost forgotten accomplishments. Van carved wood and I studied Greek, after a long lapse of years, and read Homer. Sometimes we collaborated on a novel, which, I may add, we did not expect would ever see the light. It was not worth while to send for our piano, though we missed it sadly.

Four uneventful months passed. We sat in the door one September evening, and as if realizing our loneliness we spoke together, "I wish something would happen." "If it has to be Indians!" Van added, rashly and ungrammatically.

We got the answer to our wish a few moments later, but instead of an Indian brave it was a meek specimen of civilized humanity which crept to our door. He looked all around, as if afraid of being followed, and when he reached the doorstep he fainted. Van ran for the camphor-bottle, and sprinkled him liberally; next she emptied half the contents of the brandy-bottle down his throat. In a few moments he sat up and tried to speak.

"He is crazy," I said, watching him from a safe distance. "How he mumbles his words!"

"He is not mad, most noble Festus," Van replied, as if she had known him all her life.

"Then he is intoxicated."

"No, he isn't; but it is evident that something is the matter. Perhaps he will tell us what it is when he comes to himself. At any rate we have our sensation, and it strikes me that we have our hands full. I don't know what to do with him now that we have got him. It would be easier to entertain an Indian; one could simply say 'how' to him and give him something to eat. Let's give this man something to eat; he may be half starved. I'm going for Jone as soon as I dare leave you alone with the sensation."

The man drank a glass of wine and ate a biscuit, but he did not seem at all famished. He kept gazing out of the window in a nervous fashion, and at last he spoke:

"Have you any men in your family?"

"No," said Van, with what struck me as uncalled-for frankness. It was a queer question, and I was about to reply that we had a father and husband apiece, to say nothing of several brothers and male cousins.

The sensation must have understood the look I cast at Van, for he said:

"I hope I haven't frightened you. Since there are no men here, I must tell my story to you. I am in great danger. I have crept here at the risk of my life. At any moment my pursuers may come to your door. An old man who lived in a hut about ten miles from here was murdered last night. I had spent the previous night in his hut. I was a stranger, and when he was found murdered, naturally suspicion fastened upon me. I am not afraid of a trial, for I can prove my innocence, but you know what justice means in this wild country—a chance to say a prayer, perhaps, then a rope and the nearest tree. I am not a coward, but I can't die so; I can't."

Even then I thought he might be acting, and I felt myself hardening. Van's face was as white as chalk.

"We have revolvers," she said at last, "and we will do the best we can for you. Tell us what we ought to do."

"If I hide they will find me. I'll take my chances outside. I have no right to put you through what you may have to see." He rose as he spoke.

I made an errand into the other side of the Shanty, and called Van after me. "May I ask what you mean to do with him?" I demanded.

"I don't know; I wish Jone was here."

"There he is now," I said, confident that our oracle would help us out of our dilemma.

"Hain't got any murderers hidin' in your chany-closet, hev ye?" asked Jone, as he strode up to the door. "There's a posse of men lookin' fer a murderer. They left our house a moment ago to drum up the timber. Em'ly Ann, she allowed you'd be frightened, so she made me come over and tell you what they are after. I'd 'a' gone to help them look, but Em'ly Ann was that nervous about you."

Van flashed a look at me. Clearly Jone would be worse than no help, and we must get rid of him as soon as possible. Ordinarily, when we had nothing to do but kill time we were glad to hear him spin his endless yarns; but if he were to get started now, the man in the next room might be captured and hung before our eyes. While I was thinking how to get rid of him Van started him off to help hunt for the murderer.

I locked the door after him, and when I went into the next room I found Van stirring a mixture of corn-meal and water.

"What is the use of doing that now?" I asked, thinking she was busy with our matutinal corn-bread.

"I am making a poultice. I have the whole thing planned. We must say that he is a woman friend of ours, with the neuralgia in her face. All wrapped up on the lounge, with some of our clothes on him and an afghan over him, they'll never guess that he isn't a woman." Van explained, lucidly. "His face will be covered with the poultice, and they won't recognize him if they do come in."

"But a corn-meal poultice is not the thing for the neuralgia."

"I can't help that. He must have a poultice, and I have nothing else to make it of. I'm going to put it on; there may be no time to lose."

The man lay on the lounge, dressed in a skirt of Van's, with a shawl around his shoulders. His head was covered with a blue "fascinator," and a red and yellow afghan was thrown over him. When the poultice was applied the disguise was perfect. Van's Scotch gingham flounce peeped out from the afghan in a truly feminine manner.

"Now, Laurie," Van said to me, "remember this is our friend, Miss Amy Barker, who is suffering with neuralgia in her face. Don't forget the name—Amy Barker—for if our stories shouldn't hang together it might sound suspicious. Don't move much, Miss Amy Barker."

"I won't. Are my feet covered? If they should show they would give me away."

"Your feet are covered. Don't move the poultice and show your mustache; I wish there had been time for you to shave it off. We are going to sit in the next room, and if the men come we will bring them right in here to show them that we have nothing to hide."

Van and I sat down and tried to busy ourselves with some sewing. We had taken only a stitch or two before we heard the tread of horses' feet.

"There they are!" said Van, turning pale. She took a brace of pistols from the table drawer, and went into her side of the house. "They are here. I'll leave these pistols with you. If anything goes wrong, sell your life as dearly as possible."

"Thank you," the man said, very quietly. "Will you take these papers? If anything happens they will explain who I am, and you will please write to my mother."

By the time Van came back the men were in front of our door. Three of them came in. Van opened the door in response to the rap of the leader.

"Good-evening, madam. Sorry to trouble you, but have you seen anything of a strange party hereabouts? We are looking for a young man five feet ten, brown hair and mustache, slim, and rather good-looking. He murdered old Dave Bowers in his house last night, and we want him, that's all. You haven't seen any stragglers hanging around?"

Van lied as if to the manner born, and the spokesman seemed satisfied. But one of the party said, "Suppose we glance through the house. So long's the ladies hain't got anything wrong they needn't mind."

"Certainly not," said Van, coolly. Two of the men followed her, while the others explored the chicken-coop and the cow-shed.

"We have a sick friend with us," said Van, leading the way with a lamp. "She is almost crazy with neuralgia in her face, and in this dreadful country it is so hard to get a doctor."

Miss Amy Barker lay quietly while the men gave a quick glance around the room. One of them looked into a closet and pushed Van's dresses aside, and another peered under the lounge.

"Do you know anything of that new doctor over at Madison?" asked Van. "I may have to go after him if Miss Barker gets worse."

"You may take off your poultice, Miss Barker," she said, after seeing the men ride away. "The danger is over for the present. What a lucky thing that Jone didn't come with that party! My heart was in my throat after I sent him away."

Amy Barker was pale, but he smiled as he surveyed himself in the mirror. "You have saved my life," he said, "though I must risk it again in getting away."

"That is the very thing to settle," Van replied.

Plan after plan was proposed and pronounced unsafe. At last Van, who had engineered the whole affair from the beginning, said:

"I see no other way but to borrow Jone's horse and buggy and drive you over to the station at Madison. If we meet any one, and we have to explain, I will pretend that you are Miss Church, and we are going for the doctor for Miss Barker. I thought of that when the men were here. Laurie, if any one comes you must be Miss Barker on the lounge in agony with your face. Of course, there will be some risk of detection at the station, but our friend must wear my clothes, and he may pass for some strong-minded, ill-dressed ranch woman; there are plenty of that type traveling in this part of the country. Have you a razor, Miss Barker? You must get that mustache off somehow."

"I have a razor, but this is too much to let you do for me," said the stranger, with a strong show of feeling. "Think of that lonely ride home at that time of night!"

"I am not afraid. I shall carry a pistol, and I am sure I could hit any one if I tried very hard."

While the man shaved off his mustache in Van's part of the Shanty, Van and I held a council in my part. I insisted that she should not drive the stranger alone to Madison; that I should go too. She replied that there was not room for three in the buggy, and that she was not afraid. It ended as our discussions usually ended, in Van having her own way, and we started for Jone's to get the horse.

It was half-past nine when we reached Jone's, and the lights were all out. "There is no danger that they will hear us," said Van, "for they sleep like an orphan asylum." We harnessed the horse quickly and led him slowly away, praying that he would not feel inclined to neigh his disapproval. When we reached the Shanty Amy Barker came out and took my place at Van's side. He wore the plaid gingham skirt, a Connemara wrap, a sailor hat and a thick veil. In a bag were his hat and coat. Both Van and he carried pistols.

I watched them drive away, then went into the house and put out the lights. It was then half-past ten. The night seemed endless. Eleven, twelve, one, two struck. I began to be very nervous. What if the man were a humbug after all, and what had become of Van! It was nearly three before I heard the sound of wheels.

"All well?" I asked, as I clambered into the wagon.

"He took the train, and no one molested him. It was an anxious moment when he boarded the train. I hope nothing will happen now."

She spoke as if she was very tired, and her breath came fast and heavily. We still had the horse to take back to Jone's, and it was nearly daybreak before we reached the Shanty. We did not rise till noon next day, and even then Van was too exhausted to lift her hands.

Ten days later Jone came to the Shanty with the mail. As I took it from him I noticed that one of Van's letters was addressed in strange writing. She made no remark as she read it, but that evening when we sat over our toast and tea she said, "He reached home safely."

"Who?" I asked, as if I did not know.

"Mr. Bruce, of course. He is very grateful to you for that night's work."

"I did nothing; you did it all. He used a great deal of paper to say that he reached home safely and that he is grateful to me. It is a long letter. I suppose you and he became quite well acquainted during that long drive."

"Yes, he told me something about himself. He is an artist. He comes out West every summer to sketch."

I made no comments, and Van vouchsafed no more information. I felt in my bones, as Jone would have said, that we had not seen the last of Miss Amy Barker.

We went back to Chicago to spend the winter, for the Shanty would not be endurable during cold weather. Van received letters from Mr. Bruce at regular intervals. The real murderer had been found, and quick justice had been meted out to him shortly after Mr. Bruce escaped.

The summer was a repetition of the first one. I devoted myself to raising chickens, and was much more successful than I had expected to be. Van's garden was as flourishing as the chickens would permit it to be. We had a number of acres under cultivation, thanks to Jone, and he had planted a great many trees.

One afternoon in the late summer, as I came back from Jone's, I saw a man's broad back against the window of Van's part of the Shanty. "It's Mr. Bruce!" I gasped. "Oh, my prophetic soul!" I hope that I wasn't almost sorry that we had helped him away, but as I chased the chickens out of the tomatoes I had thoughts that were anything but benign. I could not make myself go into the house just then, so I got the hatchet and began to split kindlings, an accomplishment I had acquired since leaving Chicago.

The sound of the ax brought Van out. I didn't answer her when she spoke, and she stooped and looked under my sunbonnet. I saw that she had a blue ribbon at her throat and that she had actually hunted up the long-unused curling-iron and curled her hair. Fatal signs! I burst into tears.

"Laurie Church, how silly you are! Why don't you come into the house and see who is there?"

"As if I didn't know! What do you suppose I am crying about? I won't see him; so there!" and in my tragic mood I threw the hatchet, nearly cutting the feet off our brown Leghorn rooster.

"Don't be such a goose, Laurie. Mr. Bruce has asked for you. He is only passing through on his way to Omaha."

"Oh, Evangeline Winthrop, you must have lost your senses! This is a strange route to Omaha! So direct! Don't you suppose I can see through a millstone when there is a hole in it?"

"I think we may as well have tea before he goes," said Van, ignoring my sarcasm. "What is there?"

"Nothing, and I'm glad there is plenty of it," I answered, hospitably.

Van walked into the Shanty in her statellest manner. My conscience began to trouble me as I wrestled with a dull hatchet and knotty stick, and I finally relented so far as to go in and make cream biscuit and get the best supper the Shanty could afford. Then I presented myself before our guest.

"I needn't have a poultice, need I?" he asked, as we shook hands. Van and he began to laugh

over the events of that evening, and they kept the conversational ball rolling, while I sat silent and sad behind the tea-pot.

After Mr. Bruce left a silence fell upon us. I sat in a dark corner planning how I should live when Van left me, and she spent the entire evening over a copy of "The Ring and the Book," which she held upside down.

Mr. Bruce came next day, and the next. Indeed, he stayed at the nearest town for a week, appearing at the Shanty every afternoon and "staying to tea." I might have liked him if I hadn't been sure that he wanted to take Van away from me; but as it was, I almost hated him. I little thought that Van's loyalty to me was as strong as an after event proved.

I was sitting by the window one afternoon, shelling some peas, which were to be used for seed next year. Van and Mr. Bruce came across the yard and sat down on a bench directly under my window. Before I could move or let them know of my close proximity I heard him say:

"Come, let us settle this now. I must leave to-morrow. You can't mean to hold to what you told me this morning. You can't send me away like this. I have hoped for this one thing ever since that September night when you risked so much for me. I loved you at once, and I expect to keep right on in the same way. Give me my answer now, Evangeline."

Evangeline indeed! I knew how she despised that name. I felt perfectly contemptible to sit there and listen, but I knew if I tried to slip away quietly every one of those dried peas would slip to the floor. Should I call out and tell them that I was an unwilling eavesdropper? While I was considering what to do I heard Van's voice for the first time.

"I cannot tell you anything different from what I told you yesterday. I cannot leave Laurie. When we came here I thought that I was done with such things, and we made a solemn compact that we would always stay together. You must see the claim she has on me."

"I think that my claim is even stronger, Van. How silly we are. You need not be separated. She can live with you in Boston just as well as in North Dakota."

"You can't know what Laurie and I are to each other."

"I believe you are wronging Miss Church. If she knew just how matters stand between us she would tell you to marry me."

Mr. Bruce walked away, and I heard a sob from Van. It was more than I could stand. The pan of peas slid to the floor, and I put my head out of the window, saying, "For goodness sake, Van, if you want that man, take him!"

To my dismay, there stood Mr. Bruce not five feet from the window. I believe he knew that I was at the window, and that he was talking at me all the time.

At the present writing Van and I are packing to go to Chicago. I have half promised to spend the winter with her and Mr. Bruce in Boston, and he fully promises me that we all shall spend the summer at the Shanty.

THE AUTOMOBILE VERSUS THE HORSE

In the case of the automobile versus the horse the public already has rendered a verdict for the plaintiff, with these findings: The automobile is ready without having to be hitched up. It can be more easily stored, no stable being needed. A coachman is unnecessary, since anybody, man or woman, who can ride a bicycle can run it. It is safer, as it can be guided with greater accuracy, stopped in shorter distance and turned in less space. It can be left standing without an attendant. It is speedier, cleaner, less noisy, never gets hungry or thirsty, never suffers from heat or cold, never takes fright and runs away, and doesn't fall off in condition for lack of exercise. Finally, it affords an exhilaration of swift and even movement, with nothing in front to obstruct the view, and no mud from flying heels, with a sensation of a mighty force harnessed to do your bidding, with which the horse-drawn carriage has nothing to compare. Sometimes in dreams we are borne swiftly along familiar roads, our feet near, but not touching the earth, upheld and propelled by a mystic power, while others toil onward laboriously. That is something like the sensation experienced in a first ride in an electric-cab. The first machines seen here gave forth a roaring sound, fear-inspiring to man and beast, but the substitute of rawhide for steel pinions has made the newer machines practically noiseless.

A motor-carriage is expensive to begin with; but, taking into consideration that there are no horses to be bought with it, the extra cost is more apparent than real. An electric-cab costs some fifteen hundred dollars to build, and the delicate and elegant private vehicles run up into the thousands. But the expense of operation is slight. A charge of electricity for one run may be had for sixty cents. The gasoline for an eleven-hundred-mile trip, made by a motor-carriage from Cleveland, Ohio, to New York recently, cost less than six dollars; and William G. Tiffany relates that the fuel for a two days' journey through Touraine cost him but three dollars.—Collier's Weekly.

THE HORSELESS CARRIAGE

As the "proof of the pudding is in the eating," so riding in an automobile is convincing to the most skeptical that it has many advantages over a horse-drawn vehicle. The ease with which these carriages can be handled was first demonstrated to the writer in a ride of two or three hours through the congested streets of the business part of Boston.

The driver experienced no difficulty in guiding the carriage in and out among the rucks of electric-cars, heavy trucks and all sorts of traffic that goes to make up the busy panorama daily passing in the business portion of a city. The instantaneous halt or change of direction possible with an automobile gives a feeling of security compatible with the belief that no matter how great the emergency the carriage will come out triumphant.

Writing from a popular rather than a scientific view, it is not necessary to discuss the mechanical forces constituting the driving power, nor to give in detail any advantages of one motive power over another; be it steam, electricity, vapor, compressed air, or any of the great forces, the manipulating of which needs an education in mechanism and engineering to understand, the first questions are—whether the motor-car is superior to one drawn by horses, and why? Time enough to discuss the particular power after our minds are settled upon these points.

A person possessed of an unbiased, unprejudiced mind cannot fail to acknowledge that if half what is said in favor of automobiles be true, the time is near when our old-time faithful friend and servitor, the horse, will be found in the same category with other animals (that are bred in the carefullest manner for pets and companions), and used only occasionally for riding or driving.

Long years of slavery—and too often abuse—have earned for all equine kind a place in the greenest of pastures, beside the clearest waters, where, shoeless and unencumbered, they may throw up their heels in exultation that steam and electricity have replaced them; while they, free from kicks, blows and abuse, can give their whole attention to becoming more intelligent and happy creatures. For in spite of the most advanced stage of mechanical propulsion, while men and women continue to be animal-loving beings, the horse will never become entirely obsolete.—Mary Sargent Hopkins, in Frank Leslie's Popular Monthly.

WHERE DO THE DAYS BEGIN?

Where do the days begin? They must begin somewhere, and by a clever line of argument a writer in an English paper figures out that the place where the days begin lies somewhere out in the Pacific ocean. A straight line does not define the place, but it runs, according to this theorist, in a zigzag among some of the islands scattered over that broad expanse of water.

This is determined by the following reasons: Seeing that, as one moves westward, the time gets earlier and earlier, so that when it is Monday noon in London it is some time on Monday morning in America, it follows that if this principle were continued without limit all the way around the world, at the same moment that it was Monday noon in London it would be also twenty-four hours later—that is, Tuesday noon in London. As this is of course absurd, we have to look for the limit, which does, in fact, exist, to the principle that as one moves westward the time gets earlier, and as one moves eastward it gets later.

Before the circumnavigation of the globe there was no difficulty of this kind. When the sun stood over London on Monday it made Monday noon, and when it moved westward (in the common phrase) and stood over Dublin a little later it became Monday noon in that city, and then as the western limit of the known world was reached the sun dropped out of sight until the next morning, when it came up over the eastern horizon and brought Tuesday morning. In this interval, therefore, the sun was passing over the place where Tuesday began.

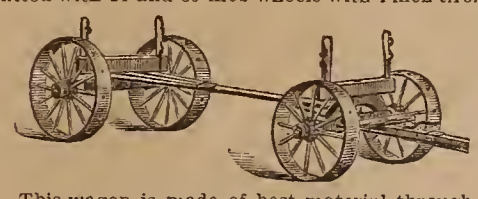
As discoverers pushed their way further eastward and westward this abyss became narrower and narrower until the place where time changed and the days began dwindled into a space no wider than a line. When the sun reaches this line time jumps forward twenty-four hours, from noon of one day to noon of the day following. The situation of this line depends on the chance of whether any given place was first discovered by a traveler from the East or the West.

As China was first discovered to Europeans by travelers from the West, and America by voyagers from the East, it is clear the line which marks where the days begin lies between these two, in the Pacific ocean, and instead of being a straight line, zigzags about, dividing islands which happened to be discovered from the east from those which happened to be discovered from the west.

There must still be many islands in that ocean where it is not yet decided to which side of the line they belong, and where if one were put down one would not know whether it were to-day, to-morrow or yesterday. There must also be many islands there which, never having been permanently occupied by civilized people, change their day from time to time, so that a ship calling there coming from China might arrive on Tuesday, while another ship calling at the same time from America would arrive on Monday.

A LOW WAGON AT A LOW PRICE

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Co., Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, that is only 25 inches high, fitted with 24 and 30 inch wheels with 4-inch tire.



This wagon is made of best material throughout, and really costs but a trifle more than a set of new wheels and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

SCHOOL-DAYS HERE AGAIN

DESPITE the housewife's best-laid plans, or her "faculty" for turning off work, September is a hurried and disagreeable month, and not least among its imperative demands the children's clothing and books must be made ready for school. To be sure, the weather for the greater part is mild enough to make summer clothing entirely comfortable, but toward the close of the month comes chilly nights and mornings, and warm underwear must be in readiness to don at short notice if we would avoid the habit (?) of taking cold easily, which clings to one so tenaciously through the entire winter.

In our changeable and trying climate the selection and care of the clothing to be worn next the person should be made a careful study by the mother. It was long ago proven to my entire satisfaction that all wool or just the right mixture of wool and cotton was the most agreeable as well as the most healthful knit underwear, and that the "spending which spares" is never more certain than in its purchase. However, if one must trust the washing to ordinary help, the mixed goods would no doubt be the most satisfactory for winter wear, too.

If one must economize closely (and there are few who do not), the garments which are most worn should not be thrown aside as long as they can be made presentable. Have the children don these at the first approach of chilly weather; later exchange for heavier worn ones, reserving the new and warmer ones until December brings real winter weather.

Darning is the neatest method of mending holes in such garments, patching the most effectual. If the latter is done with pieces cut from the legs of cashmere hose or fine knit garments, rounded at the corners, basted to position on the wrong side, with weave running the same way as the garment, and neatly cat-stitched down without turning in the edges, they will not be clumsy. Reinforce thin places, as well as actual holes, in the latter way, and when necessary the worn part can be quickly cut away and the edges hemmed down. Rework all worn buttonholes, and replace shabby bindings with new ones made of bias strips of strong muslin or silesia.

In cutting children's garments from those of adults, have the sleeves and the legs of drawers a good length, and sew a loop to the bottom of the latter long enough to slip under the hollow of the foot. The wrists and ankles are very susceptible to cold, and should be well protected.

Suspend the weight of overdrawers and petticoats from the shoulders by buttoning them to an underwaist. Two rows of buttons, one placed two inches above the other, make this easy.

Flannel knickerbockers are in every way better than muslin drawers, especially for girls in the country. Cut them three inches short at the top, and attach to a cotton circular yoke opening at the left side; or else cut full length and fit them closely at the top by taking two darts each side of the center seam. At the bottom confine the fullness in a band buttoning together on the outside, or insert elastics in hems, as you prefer. With such overdrawers one woolen petticoat is sufficient, save in extreme cold weather.

Before cutting over old garments sponge or wash in borax, soap-bark or some other good detergent, dry slightly without wringing, and press on the wrong side over a heavy blanket until perfectly dry.

A few cents' worth of any good dye will completely transform old dresses, jackets or other wool cloths that are dull, faded or of undesirable color. A navy-blue suit that had faded by wear was dyed a beautiful myrtle-green by dipping it in yellow dye. A heavy tan serge of another mother has been dyed the fashionable currant-red, and will be made into a skirt and Eton jacket for a miss of fourteen, while a black and white check of said miss will come out of its bath red and black, and be worn by her younger sister with a red guimpe.

Shirt and other blouse waists, yokes and guimpes have lost none of their popularity, and all alike are excellent styles for cutting over old garments and combining two kinds of cloth in one.

Skirts for little girls are made straight and full, with most of the fullness at the back; those for older girls with either three or four gores or circular, with no fullness at the front and hips, and an under-folded box-plait, with a fold each side of the placket on the right side at the back.

Skirts with no ornamentation except stitching, or with feather-stitching, velvet ribbon, braid or other flat trimming, are most favored for small girls. Those of older girls follow the styles of women, and have gathered frills, plaitings, overskirts, etc.

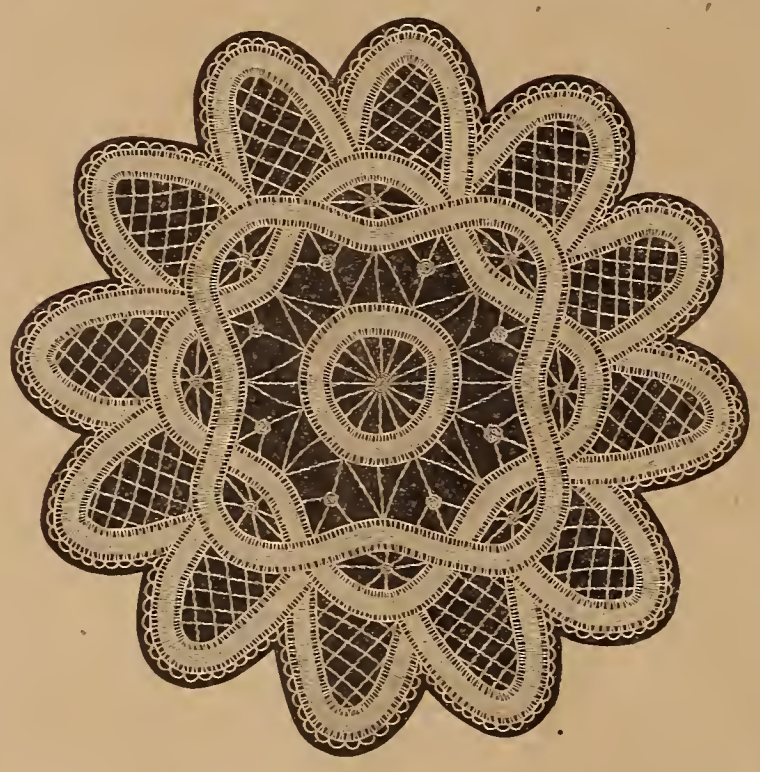
Scallops outlined with two or more rows of stitching or braid are a popular finish for reefer, Eton and other style jackets.

High aprons with yokes, sleeve-caps, bibs or other ornamental devices are alike popular for young girls and misses. The aprons most favored for little girls are cut full and slightly gored under the arms, the fullness at the top gathered into a band at the front and back and tied with straps of the same or of ribbon over the shoulder; or else they are cut with a straight yoke at the back that reaches a little over the shoulder like a shirt-waist, and a skirt like the former. They both button at the back, and the latter has a standing ruffle or turn-over collar which opens at both front and back at the neck.

Do not be careless about the fit of children's shoes. Those that are too large are as injurious as those that cramp the feet, and for girls get those of medium weight. Most girls and some boys quickly become accustomed to wearing overshoes when they go out of doors, and it is far more healthful than sitting with damp heavy shoes on. The average boy is more thoughtless, and must take his chances with thick-soled boots.

If you can possibly crowd in the time, put the school-books, tablets and slates in good condition. Cover the books with strong, pretty denim or plain ticking fitted neatly and well glued at the corners. Then letter book-covers, tablets and slate-frames plainly with the owner's name, and books with their title, and see if even Tom, Dick or Harry will not feel a new pride and thoughtfulness in their care.

ELIZABETH MORETON.



PAINTING AUTUMN FRUITS

A lady who is a clever amateur artist says that she intends to continue practising with her brushes, and hopes that when she is an old lady her grandchildren will sometimes say, "Grandma mustn't be asked to sew on buttons to-day, because she is painting." It certainly is a pleasant chord in the harmony of life to mingle esthetic pursuits with mothers more prosaic.

A lady once tried to quench my artistic pride by saying that she could not paint a picture, but she could darn a hole so that it looked like embroidery. It must be acknowledged that my darns are merely to stop the holes and not for embellishment, but we are all good women in our places with a diversity of gifts. It is after the fruit is canned, the fall house-cleaning done, the winter garments in order, that perhaps a few half days occur so free from labor that an artistic woman can get out her paints and make a picture. When you have been deep in the pickling and preserving business have you not often selected certain fine specimens of fruit and said, "What a picture that would make?" When one comes to make the picture a little experience will guide the artist to large fruits of bright hue. There is nothing more beautiful than a bunch of white currants, but two big tomatoes are much better for pictorial purposes. Grapes are tedious; each individual grape with its complicated lights and shades is as difficult to paint as an apple. Cherries are like currants and grapes. If you wish to produce a striking effect without too much time and work—and that I believe, for most of you cannot spend all your energy on art—take a fruit of simple contour and brilliant color. I admire a picture of tomatoes very much. Suppose you arrange three on a table, one in the background, and of the other two turn one so as to show the green stem and the puckered appearance. Now all will depend on the management of your subject. These things require a dark background and a foreground of dull yellow as if they were lying on a common table. Let the light fall on your fruit from your left side. Place a piece of dark drapery behind the tomatoes. This picture will fill nicely a canvas ten by fourteen inches. After drawing your outline, paint the background with just a little white darkened with yellow ocher and raw umber. Where it is darkest use burnt sienna and ivory-black. Mix the paints with your brush, and put them on the canvas with a cross stroke by means of swinging the hand first one way and then another. Do not paint pure black, but get your background as dark as you can by mingling the colors I have mentioned. Clean your brush by wiping it on the rag held between your palette and your left thumb, and then paint the tomato in the background. Use for it madder lake, vermilion and raw umber. Make it a great deal darker than a tomato *really* is. This is where some amateur artists fail, by trying to be too true to nature. You have three tomatoes before you of the same shade of red. If you paint them with this uniformity your picture will be horrid. To represent their relative position you *must vary* your depth of color. The tomato *farthest* from you must be nearly as dark as the *background*, with a dimly defined outline, and although it must have a degree of rotundity it has no high light. The tomato most conspicuous in the group must be painted brilliantly with considerable attention to every peculiarity of form, the high light definite and the reflected light and the shaded side carefully treated. The tomato less prominent and yet more noticeable than the one behind requires a middle share of attention. Do this as well as you can, having painted the foreground of white, yellow ocher and raw umber, making it lightest at the lowest edge of the canvas, and let the entire painting dry.

I will tell you of a drier that I have read about and have intended to try, but thus far have not. It is two thirds dammar-varnish and one third turpentine. This, it is said, will dry the paint so quickly that the second painting can be applied the same day. When you undertake the final touches, aim for the best results regarding your picture as a whole.

Apples make a delightful subject for a picture—they have so much variety with simplicity. In arranging your groups, do not go far for unusual situations, but do not have your fruit falling from an overturned basket. A few good pictures have been thus arranged, but it is trite, and an orderly person is made uneasy by an impulse to put things right.

The high light on the polished surface of fruit is bright, but it is not sharp like the glitter of glass. Fruits with a bloom have no spark of light. Grapes and peaches should have their natural softness. An ear or two of corn makes a pleasing picture. Have the husk partly opened, so as to show the grains. Corn and apples together are the very genius of autumn. Apples and nuts suggest Thanksgiving. Nuts and oranges can be gotten any time during the winter. We have a rich store at our command. In order to be satisfied with an oil-painting it must have a coat of varnish. Let it dry several weeks and then apply with your finger French retonching-varnish. This gives a brilliant surface that preserves the colors and sheds dust.

K. K.

A WEARY WAY

BY SUSAN COOLIDGE

The day is long, and the day is hard,
We are tired of the march and of keeping guard;
Tired of the sense of a fight to be won,
Of days to live through, and of work to be done;
Tired of ourselves and of being alone.

And all the while, did we only see,
We walk in the Lord's own company;
We fight, but 'tis He who nerves our arm;
He turns the arrows which else might harm,
And out of the storm he brings a calm.

The work which we count so hard to do
He makes it easy, for He works, too;
The days that are long to live are His—
A bit of His bright eternity;
And close to our need His helping is.

FALSE ECONOMY

She was not a young housewife, and so could not be excused because of lack of experience. She was advising a young friend to boil the coffee-grounds a second time instead of discarding them and making fresh coffee. She said:

"I pour off what is left of the coffee after breakfast, then to the grounds I add more water and boil vigorously until the water is strongly colored with coffee, after which I pour it off, add it to the rest and reboil the whole for breakfast the next day, and my family never know the difference, and they are quite particular."

This sounds very well, and under ordinary circumstances might have been an economy. Unfortunately, however, the lady in question did all her cooking on a gas-range, and what she saved by reboiling her coffee was lost twice over when her gas bill was presented each month. But ignorance is bliss, I suppose.

This is just one instance of the false economy practised in so many households. So often housewives will plan and contrive; will use up all the odds and ends of meat and vegetables in made-over dishes, requiring not a little ingenuity to think of them, in order to make both ends meet and save on the week's expenses. This is very commendable, and made-over dishes are often every bit as palatable as fresh dishes; but these same housewives, after striving all the week to make some headway, will suddenly spend all they have gained, and more, for some fruit or vegetable entirely out of season, like tomatoes by the pound in March, paying a very high price for same, when some other vegetable obtained in season, or canned vegetable, would be much more palatable and certainly more within the range of the household allowance.

We are all of us subject to these attacks of false economy, and it is not lack of intelligence, but want of thought which leads us astray. Stop and think. What false economy are you practising?

EMMA LOUISE HAUCK ROWE.

EGG-SHELLS

Through the summer season eggs are plentiful, cheap and freely used. Unless a very large flock of chickens are kept the shells are not all eaten, and go to waste. Have a box or jar near the kitchen door to receive the surplus egg-shells, and save them to mix with winter feed. A great quantity can be broken down into small space when dried, and will answer the purpose of oyster-shells, which must be bought.

GYP.

A MEAT RELISH

Cold meat may be utilized in the following way with rice: Cut the meat small as for hash; fill a deep dish nearly full with boiled rice, pour on a little gravy, place the meat over this, cover it with stewed tomatoes, sprinkle with bread-crumbs and add small pieces of butter. Bake until brown. Serve very hot.

BATTENBERG DOILY

This charming doily explains itself, and is very easily made. It forms a handsome pin-cushion-top. This pattern, when made with narrow satin ribbon and sewing-silk of some pretty shade, and placed over a round cushion of white satin, finished with a ruffle, makes a lovely cushion.

MRS. H. L. MILLER.

TWO

I dreamed I saw two angels hand in hand,
And very like they were, and very fair.
One wore about his head a golden band;
A thorn-wreath crowned the other's matted hair.

The one was fair and tall, and white of brow;
A radiant spirit-smile of wondrous grace
Shed, like an inner altar-lamp, a glow
Upon his beautiful uplifted face.

The other's face, like marble-carved Grief,
Had placid brows laid whitely o'er with pain,
With lips that never knew a smile's relief,
And eyes like violets long drenched in rain.

Then spake the fair sweet one, and gently said,
"Between us—Life and Death—choose thou thy lot.
By him thou lovest best thou shalt be led;
Choose thou between us, soul, and fear thou not."

I pondered long. "O Life," at last I cried,
"Perchance 'twere wiser Death to choose; and yet
My soul with thee were better satisfied!"
The angel's radiant face smiled swift regret.

Within his brother's hand he placed my hand.
"Thou didst mistake," he said, in underbreath,
"And choosing Life didst fail to understand,
He with the thorns is Life, and I am Death."

—Laura Spencer Porter.

THE DAUGHTER OF THE HOUSE

EVERY daughter cannot afford to stay at home and shift the household cares a little from mother's shoulders to her own, but I am afraid in too many cases they do not want to do it when they can. The condition of things has changed much in the last few years, and girls are full of the modern idea of working for money, of being independent. I believe every girl should be so educated that if it is necessary she can support herself by her own work. But is it right for girls who have comfortable homes and parents who need, if not their work, their gentle, thoughtful care, their ministry in making the home life brighter and sweeter, to insist on going out into the world to earn money, thus perhaps taking the place of one who needs the work for her own support and to help those dependent upon her? Girls, consider a little the question from all sides before you decide to become a wage-earner in the world outside of home.

Mother has been working for nearly twenty years, perhaps, doing everything she can to make home pleasant, and denying herself that you may have the advantages of education. If no other denial has been necessary she has at least relinquished your companionship, and now is it not her right that you give the sunshine of your young life to home, to father and mother, until some one shall persuade you to help build another home? Then when the cares and experiences of a woman come you will realize more fully the burdens mother has borne, and be thankful for all you have done to add to her comfort and happiness. If this "prince among men" never comes into your life you will be none the less fitted for independent work in the world because you have given some of your

young years to lightening the load of care and brightening the lives of father and mother. We are better fitted for greater service by the faithful performance of the lesser.

It is the young people, the sons and daughters, that can make the sunshine in the house. What a comfort it is to a worn and weary mother to have a daughter to smooth out little difficulties, fill the gaps and relieve by her young strong hands and ready wit and brain the strain on body, brain and heart mother has so long borne alone. If you have been given a musical education, sometime play and sing the old-fashioned music father likes. Maybe he will go to sleep the while; but never mind, he has enjoyed it just the same.

Now a word to mothers. Do not let your "selfish unselfishness" prevent you from accepting the loving ministrations your daughter is anxious to give you. You say you want to shield your daughter from hard work and care. But are you not robbing her of one of the highest sources of happiness, the privilege of doing for others? You are dwarfing not only your own life, but hers. You are too much encumbered with care to be a companion for your daughter, and she is forced to seek companionship outside of home. She will either grow selfish and hard-hearted or be made unhappy by the life she is forced to live, and sink into laziness at home or go out to work and earn a living outside the home. I believe in nine cases out of ten where daughters are selfish they have been made so by the self-sacrificing mother. No woman has a right to rear her child so that she becomes selfish and heartless. If she does it she must expect to reap what she has sown. A daughter has the right to the companionship of a cheerful, happy mother. She has the right to feel that she has a place and a work in the home that no one else can take, and it is a wrong that can be made up to her in no other way when she is defrauded of this right.

MAIDA MCL.

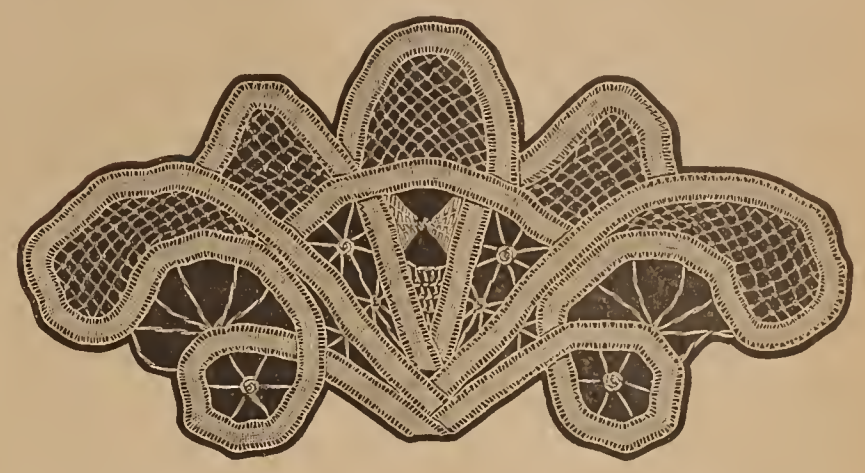
THE HOUSEHOLD

One secret of having a happy family is a due adjustment of work to rest. Nothing is gained by hurrying to meals, at meals or after meals. If possible take at least a half hour before and a half hour after your meal in the easiest possible posture. Hammocks constitute an article in my creed. No other rest is quite equal to that which we get after dinner, when stretched out in a hammock on a shady veranda. The original purpose of a Sabbath, it must be remembered, was to meet that great law of human nature, that we need to rest at least one seventh of the time. Remember that nothing is gained by wearing out faster than you can recuperate.

There has been some gain in the way of outdoor work for women, but there still remains a shame associated with doing thoroughly honorable work in the field. I have noticed that those races succeed in buying up and retaining our farms, whose men and women are not ashamed to work together, either indoors or out. Can anybody explain why it is a disgrace to a woman to toss hay or help her husband in the potato-field? I should certainly not argue in favor of a degradation of woman by imposing upon her the most menial employment, but I do believe that husband and wife may wisely co-operate in many forms of work which are now carefully kept dissociated. It would be better for both parties to more thoroughly understand each other's difficulties, and enter into closer sympathy in small, every-day affairs.

Have you ever noticed in a family of half a dozen that one has the controlling influence over the others, in a quiet, undemonstrative way? It certainly rarely occurs that all of the children harmonize; but some will draw together, while others repel each other. This is hard to explain, but it is a sort of hypnotism. I think we should take advantage of it, by carefully using the stronger ones to influence and advise the weaker. I know a pastor who trained a dozen of his young people, paying comparatively little attention to the rest. Those upon whom he laid most of his care did his work for him with the rest. As a rule the oldest boy in the family, or the oldest girl, should be the right arm of the mother to influence the rest for good.

The English custom of a bed for each person is at last getting to be an American custom. I believe that economy in every other



direction should be practised before we begin to put two children to sleep in the same bed. I should sooner expect safety from three or four in the same bed than from two. The nervous temperaments will surely be drawn upon by the more phlegmatic, and ultimately they will be weakened if not diseased.

The restoration of the curfew-bell meets a growing sentiment in the American people that we have gone too far in the way of individual license, under the general head of freedom. The police reports of such cities as Denver and St. Louis tell us that, on the average, the arrests of young people have decreased one half where the curfew law has been enforced. The old law, "early to bed and early to rise," was based upon human nature. We are stronger to endure nerve-work as well as muscle-work in the early morning. A series of experiments recently carried out by one of our school boards tells us that pupils are in best condition for solving problems in the morning. No other rest places the body and brain in as good a condition for recuperation as sleep.

LUCY POWELL.

REFRESHING SWEETS

Those who live at a distance from stores cannot always secure refreshments for unexpected callers at short notice. Ices and cooling desserts cannot be offered at the very times when they seem almost indispensable, and they cannot even be made at home if ice cannot be secured; but if oranges are kept on hand, a cooling and delicious dainty may be quickly prepared in the form of candied orange, and the same idea might be carried out with other fruits. The candied orange will make a pleasing change from the usual manner of serving the fruit whole, or simply sliced with sugar or with cocoanut and sugar.

Separate the orange into its fine sections without breaking or marring the fine white skin which divides them. Place these sections on dishes, and let them stand where it is warm until the outside is perfectly dry. Put in a granite saucepan one pound of granulated sugar and one gill of boiling water; stir on the fire until the sugar is dissolved; boil rapidly until it will form a thread, add two tablespoonfuls of vinegar, and boil continually until it is brittle when dropped in water. Now watch carefully, and the instant it begins to turn a straw-color take from the fire and put the pan containing the syrup into a pan of boiling water. Lay a section of the orange on a greased fork, and dip into the syrup until it is thoroughly coated, then place it on greased paper. Dip the pieces of orange as gently as possible or the sugar will become cloudy, and if much stirred the candied orange will not look clear and inviting. If the syrup begins to stiffen it may be heated once more without stirring, being careful not to let it scorch; but when stood in a pan of boiling water it does not harden quickly.

S. W. H.

LIME-WATER FOR CHILDREN AND FLOWERS

In every home where these blessings—children and flowers—are found lime-water should be kept prepared for frequent use; and it is so inexpensive and so valuable that a fresh supply ought always to be found in the family medicine-closet.

If any of the little tots show a trifling illness from indigestion, it is claimed that a diet of milk with one tablespoonful of lime-water added to the quart will give relief without any other medicine.

This is a remedy frequently prescribed to children under ten who seem indisposed. It furnishes a simple food and allows the digestive organs a chance to rest and restore themselves to their normal condition.

Lime-water mixed with equal parts of sweet-oil is excellent to apply to a burn where the skin is not off.

For the potted plants during the winter season lime-water will prove indispensable if earth-worms have found their way into the pots at the time of repotting, for they will soon exhaust the nutriment of the soil and leave the plants in a sickly condition. An occasional application of weak lime-water will soon destroy the worms without injuring the plants, and the fresh green appearance of the leaves will quickly show the good results of this simple remedy.

To prepare the lime-water, select a large wide-mouthed bottle, and fill it to the depth of three or four inches with slaked lime, and let it stand for twenty-four hours filled with clear water. For medicinal purposes filtered rain-water or any pure water will do. The water will take up only so much lime. When it is "saturated," as it will be in the time given if the bottle has been shaken once or twice, pour the water off through a fine muslin strainer, and set it away for use, well corked, in a cool place, and it will be ready for either the babies or the plants.

S. W. HUMPHRIES.

BATTENBERG MEDALLIONS

These beautiful medallions can be put to many uses besides the following centerpiece. Four each of these medallions are joined at the cross upon the ends of the narrow one and upon the leaf of the other, and then a center of hemstitched linen is joined to them so that each corner extends up between the two crosses upon the top of the leaf and flower medallion. The little spaces between the linen and the lace are filled with twisted or buttonhole bars. Five, six or seven of the narrow medallions can be sewed to the outer edge of a round centerpiece that has a scalloped edge and flowers embroidered upon it. Four of the larger ones can be joined to form a tidy or doily. The reduced pattern of either makes handsome tie or sash ends when made of the point-lace braid.

MRS. H. L. M.

A WAY TO CAN FRUIT

Not being very experienced in housekeeping, I never thought there was anything I could do better than my sisters who write for the FARM AND FIRESIDE, but I would like them to try my way of putting fruit into the cans, and do not be afraid of the results, for I have tried both ways and find I break less cans; in fact, I have never broken but one can in putting the fruit into the can with a large spoon, the can slightly tipped, so as to handle easy for the first two or three spoonfuls, or more if you can handle them; then set straight. Do not bother to heat the can nor wrap with a cloth or other heavy material; you will find it safer not to do so, and a great deal of time is saved. I also treat jelly and syrup in the same way.

My way of making currant jelly saves the currants as well as the juice. Clean about four quarts of currants, as if to can, put in a jelly-pan or stew-kettle with three pints of water or just enough to bring water to top of the currants. Let come to a boil, as if to can, then strain through a cloth, not pressing, and let drain for one half hour. Then for two parts of juice add one part sugar, and boil until it jellies; for the currants add one and one half cupfuls of vinegar, one teaspoonful each of cloves, allspice and cinnamon; let boil for one half hour, being careful not to let it burn, and you have spiced currants; or if the currants are green can them for pies. I have told a number of my friends these receipts and they now use no other.

FRANCES.

VACATION

It's feed the pigs to-day, my boy,
And fill the horses' mangers,
Then cut the weeds along the road,
They look so bad to strangers.
It's hunt the eggs and watch the calves,
And give the sheep their ration,
Then weed the onion-bed—you see
I'm having my vacation.

It's get a pail of water, Joe,
The kettles all need filling;
And take away this pan of musks,
Look out, my boy, they're spilling!
It's bring some wood, the fire is low,
Don't stop for recreation,
But run and hunt the baby up—
I'm having my vacation.

It's bring me this, or carry that,
All day, since school was over,
No playing ball or truant now,
No hunting larks with Rover.
I do what everybody says,
And work like all creation,
Because, you know, I am a boy,
And having my vacation.

—Lalia Mitchell, in Farm Journal.

THE EDIBLE TOMATO

THERE is no vegetable, with perhaps the exception of the potato, capable of such a variety of treatment as the tomato. It also has the slight acidity which the system seems to crave in warm weather; it is easily raised, it is cheap if you have to buy it, and it is perhaps the best all-around vegetable we have. It makes good sauces and preserves when ripe, and in its green state it makes most delicious pickles, both sweet and sour.

It is a pity that the busy housewife usually contents herself with stewing them, the very poorest way of serving them, for they are much better baked, broiled or scalloped, or cooked with rice or macaroni.

To bake them, take one half dozen fine ripe tomatoes and remove the skin. This is done by plunging them in hot water, and then the skin will pull right off. Put these into a shallow baking-dish so that they will just touch each other, and fill the vacant spaces with bread or cracker crumbs and little bits of butter. Squeeze through a colander two or three tomatoes, and add this juice to the dish after mixing with it a salt-spoonful of salt, a little pepper and a table-spoonful of butter. Sprinkle over the top of the dish some more crumbs, and bake about half an hour. If you are fond of cheese, a grating of this over the top instead of bread-crumbs makes them very tasty.

The Spaniards are very fond of frying them. Slice them and fry them in a little fresh butter and a slice or two of green peppers. Add a little pepper and salt and a young onion sliced. These are nice with cold meats and are quickly and easily prepared.

They are delicious broiled and laid on slices of buttered toast, and are particularly nice this way for breakfast or supper. Each tomato should be cut into about three slices and broiled on a small-tined broiler.

The Southerners have a way of preparing them for winter use which is very handy if you have quantities which wonld otherwise go to waste. Take fine ripe tomatoes and scald them and get off the skins. Boil them well with a little salt, but no water. Boil till they are very thick, then spread on plates and dry in the sun. In two or three days they will be dry enough to pack away in bags, which should be hung in a dry place.

TOMATO FARCIE.—A delicious and hearty dish. After cutting the tomatoes in half put them cut side down in a frying-pan which has in it half an inch of hot fat. Let them cook till they are tender, then lift them into a baking-dish. Pour over them a little sweet-oil, and then sprinkle with one cupful of bread-crumbs, chopped parsley, one small onion and pepper and salt. Bake twenty minutes in a hot oven.

GREEN-TOMATO PICKLE.—This is very tasty, and the oil gives it a richness that the ordinary pickles lack. To one peck of green tomatoes sliced very thin add two quarts of onions also sliced. Sprinkle with salt, and the next moruing drain through a sieve, then boil them in vinegar till they are tender. Put into a quart of fresh viuegar two pounds of brown sugar, one half ounce of mustard-seed, one half ounce of ground mace, one tablespoonful each of celery-seed and ground cloves; let these boil together for a few moments, then pour over the tomatoes, which have been drained. Put them in your pickle-jar, and then stir in one half tablespoonful of cayenne, one half tablespoonful of ground mustard and one half bottle of salad-oil, these latter having been well mixed before adding.

FRENCH PICKLE.—This is simple, but very good. One peck of green tomatoes sliced, six onions and six green peppers chopped, one cupful of salt sprinkled throngh, and let them stand over night. In the morning drain thoroughly, then boil fifteen minutes in one quart of vinegar and two of water. Drain from this and make a syrup of three quarts of vinegar, two pounds of sugar, one half pound of white mustard-seed, two table-spoonfuls each of cloves, allspice, ginger and cinnamon. Put spices, which should not be ground, into a cheese-cloth bag. Cook slowly two hours, then put in bottles and cork. This is a tart pickle notwithstanding the sugar.

EAST INDIA PICKLE.—Rich and sweet. Select firm light-green tomatoes, cut them in slices, and put them in a weak brine made by putting a cupful of salt into a gallon of water. Let them stay twenty-four hours, then take them out and rinse in clear cold water, and put them in a preserving-kettle. Cover the tomatoes in the kettle with vinegar, putting two pounds of sugar to each quart of vinegar. Add also to each quart of vinegar one ounce of ginger-root. Cook the tomatoes till they are clear and transparent and perfectly tender, but not till they break. It will take about fifteen minutes after they begin to boil. As soon as they are cooked stir in cassia-buds, cloves, mace and stick cinnamon, one ounce of each being allowed to each quart of vinegar. Put in jars, and set away covered with a heavy cloth. These keep indefinitely and are delicious.

CHOW-CHOW.—Cut small one half peck of green tomatoes, one quart of ripe tomatoes, two large cabbages, one dozen white onions and two dozen cucumbers. Mix them and sprinkle salt well through them. The following morning drain off the brine and cover them with boiling vinegar, one and one half gallons, in which has been boiled one pint of grated horse-radish, one half pound of mustard-seed, one half ounce of celery-seed, one half cupful of ground pepper, one half cupful of turmeric and of ground cinnamon and four pounds of sugar. They should be kept in jars in this liquid, but when you wish to use the chow-chow drain the vinegar from that portion you serve.

TOMATO CATCHUP.—Let your tomatoes be perfectly ripe, and put them in a shallow saucepan. Add salt, a few slices of onion and some red peppers sliced. Stew on a slow fire till it is quite thick, and then rub through a hair-sieve. Let it stand a day, then bottle it, seeing that the bottles are carefully sealed.

UNIVERSAL PICKLE.—This is a cnrious old-fashioned receipt, yet very useful to use up odds and ends. It is very tasty, too, and helps down cold meat in an appetizing manner. Take six quarts of vinegar, one pound of salt, one quarter of a pound of ginger, one ounce of mace, one half ponnd of small onions, one tablespoonful of cayenne pepper, two ounces of black pepper and two ounces each of mustard and celery-seed. Boil these well, and when cold put in a jar. Add from time to time such vegetables as you have—beans of all kinds, firm tomatoes sliced, carrots, onions, turnips before they are mashed, beets, cucumbers, anything except soft vegetables like squash. Mix them each time you add new ones. This keeps forever. MRS. S. P. MOORE.

SOME BLUEBERRY RECEIPTS

EXTRA BLUEBERRY PUDDING.—One cupful of butter, one cupful of sour milk, four cupfuls of flour, five eggs, one teaspoonful of soda, one quart of berries. Beat sugar and butter to a cream, then add the eggs well beaten, then the sour milk in which you have dissolved the soda, then the flour, and lastly the berries. Wring pudding-cloths out of boiling water, spread out in a deep dish, pouring into this your batter. Put into a kettle of boiling water, boil three hours, and serve with vinegar or wine as a sauce.

PLAIN BLUEBERRY PUDDING.—One pint of flour, one egg, one half pint of sweet milk, one and one half teaspoonfuls of baking-powder, one quart of berries. Beat the eggs to a froth, mix this in the milk, then stir in the flour, baking-powder, and lastly the berries. Steam. Eat with cream and sugar. This is also good baked.

BLUEBERRY DUMPLINGS.—One quart of flour, one pint of milk, one tablespoonful of sugar, two tablespoonfuls of baking-powder, a pinch of salt. Make like biscuit-dough, cutting out with a biscuit-cutter. Roll flat, so as to leave room for the berries. Wet the edges, turn together, and either steam or bake. Serve with sugar and cream.

BLUEBERRY CAKE.—One tablespoonful of butter, one cupful of sugar, one cupful of milk, one teaspoouful of saleratus, two teaspoonfuls of cream of tartar, one pint of flour. Beat the sugar and butter together, then add two eggs, milk and flour, and lastly a pint of berries. To be eaten warm.

BLUEBERRY PATTIES.—Make same as for blueberry cake, and bake in little patty-pans instead of one large cake. A pretty change for a summer tea.

BLUEBERRY TURNOVERS.—Plain pie-crust answers best, as the berries are very rich. Roll out crust, sprinkle dough with flour and sugar, lay the berries on, then sprinkle the berries with flour and sugar; now wet the edges of dough, turn over, and pinch with the fingers to prevent the juice from running out. Make slits in top of turnover.

BELLE KING.

FROM SUNDAY'S ROAST

There is nothing which will more quickly dispell the family appetite than the reappearance of Sunday's roast in its original form. Thinly sliced cold meat is uot to be despised for supper, but do uot, I pray you, let it be seen too often at breakfast. There are so many savory dishes to be devised from a roast that it is quite as great a source of enjoyment as in its first state. Hash has fallen into disrepute, but when properly made it is very good indeed.

Try this way: Remove fat and gristle, chop medium fine, and put in a saucepan with water enough to come up through it. Let it simmer for a few minutes, then season with salt, pepper and a little chopped parsley. Rub a tablespoonful of butter smooth with one and one half tablespoonfuls of flour, pour some of the gravy over this till it is like thick paste, then stir into the meat. Have ready two hard-boiled eggs for each quart of meat, chop fine, and add just before serving. This is like the famous dish of the nursery rhyme, "fit to set before the king."

CASSEROLE OF RICE AND MEAT.—Boil one cupful of rice in two quarts of boiling water until tender, drain, and line a mold. Fill with a large pint of cold chopped meat well seasoned and moistened with one cnpful of tomato sauce or with one cupful of milk in which is a beaten egg. Cover with the rice, and bake abont twenty minutes. Serve with tomato sauce or some of the gravy left from the day before.

MOCK-CHICKEN SALAD.—Scraps of veal, mutton or beef may be used for this. Mince the meat, and to each cupful add two small cupfuls of very finely cut cabbage, one teaspoonful of celery-seed (more if desired), salt to taste, and any good salad dressing. This is delicious in spite of its cheapness.

FRICASSEE.—Chop the scraps of meat and place in a stew-pan with a little water, salt, pepper and a little lump of butter. Add one half cupful of milk in which is some thickening. Serve on slices of toasted bread, and be sure that the dish is hot when sent to the table.

MEAT CHEESE.—Boil the meat scraps which you have on hand—the more kinds the better—in a very little water until soft enough to mash to a pulp. Add salt, pepper and a little sage, put in a dish with a plate and heavy weight on top. The next day turn out carefully, and serve cold. Cut the slices with a sharp knife. It is very nice for supper.

GREEN-PEPPER HASH.—To every pint of finely chopped meat add one large green pepper minced and seeds removed. Put into a stew-pan with a little hot water, one table-spoonful of butter, salt to taste. Let cook till but a few spoonfuls of the water remain. Garnish with parsley, and serve with a border of mashed potatoes.

MEAT AND VEGETABLE STEW.—For this the meat need not be so fiuely chopped. To each quart add two potatoes sliced, one handful of lima beans, a small tomato chopped, one onion, some parsley, and salt and pepper to taste. Thicken the gravy, serve with bread and butter, and eat and be thankful. To render it altogether a meal to be remembered add drop-dumplings.

MARY M. WILLARD.

"SHE THAT HATH EARS TO HEAR, LET HER HEAR"

Very few people know that a little blueing added to each water through which clothes pass will greatly improve the appearance of the clothes. But it is true nevertheless. The finest laundry-work is cleared in this wise. A small portion of old-fashioned indigo is dissolved and added to the boil. Indigo is used in preference to any other blue, as it will not settle in spots, and liquids or powders might. After the clothes have been boiled in this water they are thrown into a tub of blued suds and passed from that into the blue water proper, and they come out of this rinse as white as snow.

Very few people know that a little blue added to the starch greatly improves the articles starched, and very few people know that a little starch added to handkerchiefs add greatly to their appearance. Very few people know this, and the most of those who do not know are too skeptical to try it. It is not necessary, neither is it desirable, to cold starch them as you would your collars and cuffs and shirt-waists, but if you would have your handkerchiefs triumph of the laundry art, just stiffen them slightly. At least try. Iron them damp, embroidered side down, and you will be delighted.

Your shirt-waists starch stiff in cold starch if yon want something extra nice, bnt your collars and cuffs send to the laundry.

Much may be added to the beauty of a washing by a symmetrical arrangement of the clothes on the line. The line should first be carefully rubbed with a damp cloth, then such large articles as sheets, table-cloths, skirts and nightgowns should be shaken thoroughly and hung. Arrange all articles of the same character in groups. For instance, all the pillow-cases, napkins and handkerchiefs should be placed by themselves. This systematizes yonr washing and gives it a very neat appearance. As soon as the clothes are thoroughly dry they should be taken in, as otherwise they collect dust, are tossed by the wind and lose their freshness.

Have you ink-stains on any of your white handkerchiefs? Apply lemon-juice, and patiently rub the inky spot an hour, perhaps two hours; but lemon-juice and perseverance will remove the stain.

Is there iron-rust on any of your clothes? Apply dry oxalic acid, rub quickly and immerse in warm water. If the first application proves insufficient, try a second; but do not allow the oxalic acid to remain on the cloth long, because it will eat it full of holes. There is no danger of such an accident if you work quickly. If you are afraid of the acid try lemon-juice and salt. That requires more time and more patience, but will remove iron-rust or mildew. Any of these receipts should be applied before the articles are washed, for reasons which are apparent.

One more word. Do you use the heavy old wooden tubs? Sell them or use them for kindling-wood and buy new, light, galvanized iron tubs. Quit breaking your back. MARGARET M. MOORE.

PENMANSHIP

Why is it that some persons aim to make their penmanship utterly unreadable? I have a correspondent of this class, not ignorant, but educated up to the highest notch, uses good language and all that, bnt her letters are painful to me because they are almost unreadable. The only fault is in the formation of the letters, which do not conform to any system of penmanship that I ever saw. And while I try to solve the penmanship I am also puzzling over the problem, "Why does any person of common sense write in this way?" All readers are more or less familiar with this style of writing, especially in letters of business that ought to be plain.

I once heard a gentleman remark on the peculiar ability a friend of his displayed in being able to write as well with his left hand as with his right. On being questioned he admitted that one handwriting was as easy to read as the other; that his friend was a lawyer.

A famous lawyer was once engaged in trying a case with another high up in the legal profession, and received a letter from his colleague that was unreadable. He gave the letter to a friend, promising her a liberal percentage of the fee if she would translate it. She earned her reward after some hours' work on the epistle. This writing consisted of two or three letters at the beginning of a word, followed by an irregular scrawl.

I suppose everyone has heard of the two editors who had some business projects with each other. They exchanged two or three letters, but finally gave up their plans, owing to the inability of each to extract the other's meaning from his writing.

But I hope the time is almost here when writers will take pride in their ability to use the pen well. Those who cannot write a plain hand should make use of the typewriter for their correspondence.

Boys and girls at school, I say unto you, learn to write. Do not have a handwriting that looks as if a spider had fallen into the ink and then taken a promenade over the fair page. Do learn to write a good, plain hand, and the readers of it will rise up and call you blessed. AUGUSTA MILLER.

OUR SUNDAY AFTERNOON

MY WORK

I come to thee, O Lord, for strength and patience
To do thy will;
Help me, O Father, in this world of duty,
My place to fill.

I may not go and labor in thy vineyard,
Where through long hours
Brave men and women toil, and from thy presses
The red wine pours.

My work at home lies with the olive branches;
My field is there—
To train them fitly for the heavenly garden
Needs all my care.

I may not, in the woods and on the mountains,
Seek thy lost sheep—
At home a little flock of tender lambkins
'Tis mine to keep.

Thou givest us, thy servauts, each our life-work;
No trumpet tone
Shall tell the nations in triumphant pealing
How mine was done.

But 'twill be much if, when the task is over,
Through grace from thee,
I give thee back, unharmed, the precious treasures
Thou gavest me.

—Mrs. M. P. Handy, in the Union Signal.

THE LONELY

WE ARE all at times inclined to be discontented with the ordinary intercourse of life. The occasions for anything like real communion are very few. The trivial and commonplace, the transitory and fleeting, absorb most of the talk and interest. We come away from meeting our fellows feeling hollow and empty, with a latent shame in us that we have given away to meaningless gossip and senseless babble, however harmless.

We are timid about trying to divert thought and conversation into deeper channels. We fear to be called eccentric or pedantic, to be looked upon as a moralizing bore, or one who believes himself to be wiser or better than the average in his self-appointed office of rebuking the follies and trivialities of the day.

This prevailing pettiness destroys or benumbs much that is fine in human nature. Many who are too timid to be innovators, and dread to be called original, suffer from mental hunger and the sense of loneliness because they wish to hold a place on the low level of chaff and petty detail where society now decrees that human beings may meet. They find themselves caught in the web of fine but tenacious meshes, where people spend time together without saying anything, where they congregate without having met, where they buzz rather than converse, where they see the surface without knowing anything that lies under save by stray glimpses and broken hints. Many live long years without opening the heart—lubricating the being by free and full confidence and interchange of thoughts and feelings that lie in the sanctuary of the mind. Thus repression puts straps and draws cinches in our mental processes, and may lead to atrophy or violent rebellion.

This is a tragic kind of loneliness and soul hunger—to know that before God we might have been something more and better, might have lived a grander, braver life, might have broken living bread to such as are in need, or have brought the water of life to those who thirst if the Liliputians had not caught and fettered us hand and foot. What we see is a fine position—perbaps much worldly respect, good connections, all of the regular kind. Society, so called, has to answer for the crimes of those it has choked and bound with the most tenuous bonds, whose repressed impulses toward good have finally carried them to dangerous and unholy provocations. A struggling creature with yearnings toward the better life, toward action, sympathy, self-sacrifice, noble devotion, yet hedged in a little paddock behind a locked gate, where the herbage is sweet and juicy, with no one to speak to of the things that struggled for utterance—here is tragic loneliness.

Deplorably many are the "good" people who insist on pettiness. Be as small, as narrow-minded as you please, but think no new thoughts, make no innovations, keep to the same little mincing steps on the beaten track, never dare nor adventure. So the deadliest loneliness is often felt in what is called the world, where all faces seem enameled, all eyes might as well be made of china as of living organism. Oh, for a spark of soul, for a true word that shall leap out because it cannot be expressed, a gleam of recognition that makes luminous the cloudy day so fraught with darkness and doubt, discouragement and hopelessness!

The human gateways of sympathy often seem locked and barred, and those who need to enter get no response to their knock. We look searchingly in faces, and we say to those polished and polite images, "Have you lived, have you suffered, have you wept over your dead, have you been stirred to your being's core by great devotion, by heroism and mighty truth or transcendent goodness? If so, wherefore so cold, so shut up in self, so repellent to confidence and human interchange? Alas! poor creatures, are you, too, prisoners grown hopeless that any one can speak to your inner selves, can know what you think?"

But there are other moods and other days, when all faces look open like gentle books; and you read on each some little word of cheer. One is humble and kindly, another is patient under affliction, another, if unrecognized, is still sweet and blithe, another has lost all, and can still live and bless God. The commonplaceness, the mediocrity, has gathered a kind of beauty. We read its hieroglyphics and see they are compounded of spiritual facts. If people speak to us of nothing great or good, there is still something about them that does speak. It blabs, though they are unconscious. The essence is always escaping, though we think we have it in sealed bottles.

So our hearts say to us, "Who is not lonely in all the world?" The loneliest are not those who dwell in field or forest or on desert islands. They are often in the busy throng. Their eyes are wells of longing. The world is full of people. Still they are unsatisfied. They have a secret, but the person to whom it may be told has not been found. The poor farmer's wife looks the hunger of her soul; but it is not the year's hay crop that is troubling her, but the fact that she has "no one to speak to." The successful business man, lawyer, merchant knows, with all his telling and doing, bustling and contriving, there is a lonely place within. Still he is alone in the midst of his successes. The greater he is the more alone.

We carry this pain and ache with us, unconscious that it is the divine thirst that God only can fill by giving us ever larger and larger measure of himself. The more that is given, the more we long for the supreme thing that shall make us understood by others, and better to understand ourselves. We have stammered only two or three words of the volume that is in the soul. The mystery of being is there intrenched. It does not dwell in company. It eludes definition. Jesus, the great sympathizer, revealer, friend, probed deeply into the recesses of the human heart, touched profoundly those secluded regions where the soul hides. Therefore, the eternal gratitude of the race. He, the lowliest man God has sent into the world, became the most companionable, the most intimate revealer. Our loneliness aches within us, but it is the sign of promise. We were lost indeed should this divine pain cease, were we callous to the intimations of growth and expansion that make yearning the foretaste of fruition.—The Christian Register.

SIMPLICITY OF SPEECH

The coxcomb and the egotist use "great, swelling words." The scholarly man, the man of genuine polish and refinement, uses language beautiful for its simplicity and directness. The former are vain and desire to make a display; the latter are humble and speak to instruct.

The writer once listened an hour and a half to the scholarly, refined Anson Burlingame, of Massachusetts. It was during the presidential campaign of 1856. He was advocating the election of John C. Fremont. Oh, how eloquent and impressive he was! How scholarly! and withal simple as a child. He did not "make a speech," but in great simplicity of language talked to his vast audience. And how the people hung upon his words! Get tired? Speech too long? Not a bit of it. Everybody was sorry when he quit. The common people could understand every word he uttered; and then he was so instructive, and his illustrations were so apt and simple.

The common people do not carry dictionaries with them, either in their pockets or in their heads. The speaker who would reach and interest as well as instruct them must recognize this fact and confine himself to their vocabulary.

Truly great men are noted for the simplicity of their style and the directness of their action. They not only use the simplest and most expressive words, but avoid all unnecessary words? Take, for example, Lincoln's renowned speech at Gettysburg. Can you find in it an unnecessary word? Can you find there a word the meaning of which the common people do not readily grasp? Edward Everett, who delivered the great oration on that same occasion, said that Mr. Lincoln condensed into twenty-eight lines of long-primer in an ordinary book what it took him, with all his scholarship and polish, an hour and a half to say. Why? Because Lincoln expressed the great thoughts of the occasion in a few sentences of simple, plain English. And who reads to-day Everett's masterly address on that occasion? Who does not read, study, and admire the short, simple address given there by Abraham Lincoln?

But over and above all the model speeches of great men, Christ's "sermon on the mount" stands out as the perfection of true oratory. Study it, notice how beautifully simple the language, how natural and expressive the illustrations, how appealing to human sympathy the sentiments uttered, how impressive to the human soul the truths declared! Well did Daniel Webster say, "No mortal man ever produced that sermon." He who uttered those truths, so admirably applicable to the hopes, fears, desires and aspirations of the human soul, surely knew all about and fully understood man's real being and condition.

Horace Greeley made the New York "Tribune" a revolutionizing force in this country. How? By clothing his masterly editorials in the language of the common people. His paper found its way into the homes of the farmers, mechanics, artisans and common toilers of America, and when once there, no other paper could dislodge it. Mr. Greeley, from the standpoint of a politician, statesman and reformer, lived, thought and wrote on the plane of the common people, and the whole nation read, admired, and finally the great majority of the people came to believe in and pronounce in favor of the reforms he advocated.

May not the speakers and writers of to-day gain some valuable hints from the facts? Especially may not the young ministers of our church profit from these suggestions? Let all possible scholarship be acquired. Let the highest available attainments in polish and refinement be achieved. But with all this, in the presentation of truth, let the style and diction be within the grasp of the common people. Do not aim to appear scholarly. Do not use "great, swelling words" of men's wisdom. Be direct, plain, simple but impressive and effective in both word and manner.

But some, in attempting to be plain and simple in a speech, fall into the mistaken notion that to be so they must be rude, uncouth and boorish. Not so. Read Bunyan's "Pilgrim's Progress;" read "Robinson Crusoe;" read the "sermon on the mount." The language is the very perfection of simplicity, but not a rude expression is to be found in any of those masterly productions. The language is simple, the style chaste, and withal, the thought most elevating and impressive. You can do as well.—The Religious Telescope.

A CURE FOR SLEEPLESSNESS

For the purpose of inducing sleep the following remedy is valuable: A warm full bath taken in the evening just before retiring is a valuable means of inducing sleep. The bath should be at a temperature of from one hundred and two degrees to one hundred and four degrees. The patient should remain in this bath for twenty minutes, and while in the bath should be rubbed vigorously by an attendant. The head should be wrapped in a towel wrung out of ice-cold water. After this warm bath the temperature of the water should be reduced gradually to about eighty-five degrees for the purpose of cooling the patient, and then he should be dried thoroughly and put to bed immediately, preferably without being allowed to walk or make any muscular exertion at all. A rubber bag containing warm water should be applied to the feet, the room should be made quiet, with all possible conditions conducive to sleep.—Good Health.

SMILES

AGRICULTURAL COURTSHIP

A potato went out on a mash,
And sought an onion-bed;
"That's pie for me," observed the squash,
And all the beets turned red;
"Go away," the onion, weeping, cried,
"Your love I cannot be;
The pumpkin be your lawful bride;
You cantelope with me!"

But onward still the tuber came,
And laid down at her feet;
"You cauliflower by any name
And it will smell as wheat;
And I, too, am an early rose;
And you I've come to see,
So don't turn up your lovely nose
But spinache at with me."

"I do not carrot all to wed,
So go, sir, if you please!"
The modest onion meekly said,
"And lettuce, pray, have peas!
Go, think that you have never seen
Myself, or smelled my sigh;
Too long a maiden I have been
For favors in your rye!"

"And, spare a cuss!" the tuber prayed;
"My cherryshed bride you'll be;
You are the only weeping maid
That's currant now with me!"
And as the wily tuber spoke
He caught her by surprise,
And, giving her an artichoke,
Devoured her with his eyes.

SHE WAS PREPARED

THE vicar of a little parish in Devonshire always felt it to be his duty to give each couple a little serious advice before he performed the marriage ceremony, and for this purpose he usually took them aside, one at a time, and talked very soberly to each of them regarding the great importance of the step they were to take and the new responsibilities they were to assume.

One day he talked in his most earnest manner for several minutes to a young woman who had come to be married.

"And now," he said, in closing, "I hope you fully realize the extreme importance of the step you are taking, and that you are prepared for it."

"Prepared?" she said, innocently. "Well, if I ain't prepared I don't know who is. I've got four common quilts and two nice ones, and four brand-new feather-beds, ten sheets and twelve pairs of pillow-slips, four linen table-cloths, a dozen spoons and a new six-quart kettle. If I ain't prepared no girl in the country ever was."

WE ALL WONDER

"Pa," began little Clarence Callipers, who is cursed with an inquiring mind, "those little babies—with no bodies, but only just heads with wings on 'em where their ears ought to be—that we sometimes see in pictures are cherubs, aren't they?"

"Yes, I guess so," answered his long-suffering sire.

"Well, now, pa, as they haven't got any tails to balance themselves with, why don't they flop over and bump their noses when they try to fly?"

LITTLE BITS

The English cousin—"What do you mean when you say that a person is 'in the soup?'"

The American cousin—"They mean that he is not in it."

When a man slips on an orange-skin, the first thing he does is to look back to see what it was. The first thing a woman does is to look around to see if any one saw her.

"No, Willie, dear," said mama, "no more cakes to-night. Don't you know you cannot sleep on a full stomach?"

"Well," replied Willie, "I can sleep on my back."

A young hopeful sat in the window a long time the other night during a thunder-storm, and contemplated the scene with a wise look on his face. Then he turned to his mother, and said, "Mama, the angels are scratching matches on the sky."—Household Words.

The tramp who "lost everything in the Mississippi floods" is now abroad in the land. One of them approached a benevolent old gentleman in Atlanta Sunday.

"And you say," said the old gentleman, "that your children were drowned in the flood?"

"Yes, sir," replied the tramp, wiping his eyes with his coat-sleeve; "seventeen of 'em!"

"God bless me!" exclaimed the old gentleman, "you are a young man, scarcely thirty, and—"

"I know that, sir," interrupted the weeping tramp, "but they wuz all twins."—Atlanta Constitution.

The subject of the essay of a young lady who was graduated from a high school in an Ohio town was "Hawthorne." In her essay she said: "At the age of thirty-nine Hawthorne married and took his wife to the old manse."

The day after the commencement one of the village maidens called on Miss E., and in talking the affair over remarked, "Wasn't it mean that Maude should say such a thing in her essay?"

Miss E. inquired what she alluded to.

"Why, she said at the age of thirty-nine Hawthorne married and took his wife to the old man's. Why didn't she say to his father-in-law's."

AND HE DID

Angler—Hush! Keep back! Keep back! I had a beautiful rise just then. Get another directly.—Punch.

MISCELLANY

THE first matches were made in 1746.

THE Chinese invented paper 170 B.C.

SOUND moves about 743 miles an hour.

THERE are at least 10,000,000 nerve-fibers in the human body.

HE WHO buys wants a hundred eyes, and he who sells needs have but one.

SPENDING your money with many a guest empties the kitchen, the cellar and chest.

GOLD can buy nearly everything in this world except that which a man wants most—happiness.

IT IS always safe to learn, even from our enemies—seldom safe to instruct, even our friends.

TRUTH—the open, bold, honest truth—is always the safest for any one in any and all circumstances.

THE greatest depth to which a ship has been anchored is 2,000 fathoms, considerably more than two miles.

THE thickness of buman hair varies from the twenty-fifth to the six hundredth part of an inch; blonde hair is the finest, and red the coarsest.

DROP a few small nails in the bottom of the ink-bottle. The acid in the ink will then exhaust itself upon the nails, and pens will not corrode.

EXPERIMENTS now show that during profound sleep a noise not sufficient to awaken the sleeper produces a perceptible rise in the temperature of the brain.

LAKE MORAT, in Switzerland, has the curious property of turning red every ten years, owing to the presence of certain aquatic plants which are not known in any other lake in the world.

NEAR the equator and toward the poles the ocean is less salty than in other parts. This is no doubt owing to the abundant rains at the equator and to the melting of the ice in the polar regions.

IT IS safe to estimate that the total war expenses to date have not been less than $300,000,000. The Navy Department's expenses in April were $4,628,000, which is not largely in excess of the normal.

THE palms of the hands and soles of the feet are composed of cushions of fat in order that sudden jolts and violent blows may be successfully resisted, and no injury done to the muscles and bones underneath.

THE strongest animals in the world are those that live on vegetable diet. The lion is ferocious rather than strong. The bull, horse, reindeer, elephant and antelope, all conspicuous for strength, choose a vegetable diet.—Scientific American.

OF THE forty-five states that now comprise the United States, in five the higher judges are elected by the legislature, in seven they are appointed by the governor by and with the advice and consent of the council or senate, while in thirty-three they are elected by popular vote.

CITY people may congratulate themselves that they are very much less liable to lightning-stroke than country folks. In fact, it is reckoned that the average person in a rural district is five times as likely to be struck by lightning as a town resident. This is because the tin roofs, drain-pipes, etc., of city houses serve as conductors for electricity. It is practically unnecessary to provide lightning-rods for a dwelling in a city block.

THERE are some curious facts about our calendar. No century can begin on Wednesday, Friday or Sunday. The same calendars can be used every twenty years. October always begins on the same day of the week as January, April as July, September as December. February, March and November begin on the same days. May, June and August always begin on different days from each other and every other month in the year. The first and last days of the year are always the same. These rules do not apply to leap year, when comparison is made between days before and after February 29th.

IT IS estimated that the total number of telephone subscribers of the whole world amounts to about 1,500,000. The United States stands at the top with 900,000. Then follows Germany, with 160,000 subscribers; England, with 75,000; Switzerland, with 50,000; France, with 35,000; Austria-Hungary, with 30,000; the vast Russian empire, with only 18,000; Scandinavia, 16,000; Denmark, with 15,000; Italy, 14,000; Holland and Spain, each 12,000; Belgium, 11,000; Japan, 3,500; Portugal, Luxemburg, Australia, each 2,000; Roumania, 400; Bulgaria, 300. It will be seen that there is still plenty of room for extension. There are many countries where the telephone is still quite unknown.

THE territory of Alaska cost $7,200,000. Up to date the fur companies have taken more than $33,000,000 worth of sealskins. They have paid into the treasury more than $6,000,000 as royalties, with $1,340,533 in dispute, says the "Saturday Evening Post." No estimate of the whale fisheries is accessible, but the value of the product is roughly placed at $2,000,000 a year, and the total of $20,000,000 since Alaska was ceded to the United States. The salmon fisheries yielded $2,977,019 in 1897, and nearly $4,000,000 in 1898. The exact figures are not yet known. Since annexation the total output of the salmon fisheries has exceeded $30,000,000. In a letter to Congress the United States commissioner of fish and fisheries estimated the value of the Alaskan fisheries, excluding whales and seals, at $67,890,000. The gold output up to 1897 exceeded $15,000,000; the total for 1898 is estimated at $6,000,000, although the exact figures are not obtainable.

THE RATIO OF ILLITERACY

Statistics of illiteracy are sought in continental nations of Europe in the case of soldiers recruited for service in the army. Among German recruits, for instance, the percentage of illiteracy is 1.1. Of 1,000 recruits, 989 can read and write, 11 cannot. In Switzerland the percentage of illiteracy is one half of 1 per cent; in France it is 5½ per cent; in Holland it is a little less—5.4; in Belgium it is 13.5; in Italy it is 38; in Hungary it is 28, and in Russia it is 70. There are no authentic figures of an official or quasi-official character in Spain showing the illiteracy of army recruits. In Spain, as in Great Britain, the test of illiteracy is the record of marriages, from which it is seen that about 65 per cent of the population of marriageable age seems to be illiterate.

According to the last figures of those signing marriage certificates in Scotland the ratio of illiteracy among them was only 35 per thousand. In England it was 58 and in Ireland it was 170; but since then, of course, the general diffusion of education has further reduced the figures, making them approximate those of Germany and other countries of the continent. In Norway and Sweden the army percentage is nearly identical with that of Germany. In Denmark the ratio of illiteracy among army recruits is very little higher than it is in Switzerland, and in Austria (German provinces) the ratio of illiteracy is very low. In some other parts of the Austrian empire, however, Croatia, the Tyrol and Austrian-Poland, the ratio of illiteracy is much higher, bringing it up among the army recruits generally to 12 per cent. In the United States 20 per cent of the population, a larger proportion than in any other country, is enrolled at schools, the average attendance at which exceeds 10,000,000. To the large colored population and to the alien population of the United States is due the fact that there is any illiteracy here to speak of.

CURIOUS TREES

Among the most singular specimens of vegetable life are the bottle-trees of Australia. As the name implies, they are bottle-shaped, increasing in girth for several feet from the ground, and then tapering toward the top, where they are divided into two or more huge branches bearing foliage composed of narrow, lance-shaped leaves from four to seven inches long. The bark is rugged, and the foliage is the same in the old and young trees. The bottle-tree sometimes grows to a height of sixty feet, and measures thirty-five feet around the trunk. Many of these trees are supposed to be thousands of years old.

The angry-tree is also a native of Australia. It reaches the height of eighty feet after a rapid growth, and in outward appearance somewhat resembles a gigantic century-plant. One of these curious trees was brought from Australia and set out in Virginia, Nevada, where it has been seen by many persons. When the sun sets the leaves fold up, and the tender twigs coil tightly, like a little pig's tail. If the shoots are handled, the leaves rustle and move uneasily for a time. If this queer plant is moved from one spot to another it seems angry, and the leaves stand out in all directions, like the quills on a porcupine. A most pungent and sickening odor, said to resemble that given off by rattlesnakes when annoyed, fills the air, and it is only after an hour or so that the leaves fold in the natural way.—The Evangelist.

EATING SNAILS

The stories about Frenchmen eating snails are believed by many people to have no foundation in fact, but snails are eaten, and to a very considerable extent, in France. Nearly 100,000 pounds weight of snails are sold daily in the Paris markets to be eaten by dwellers in that city. They are carefully reared for the purpose in extensive snail gardens in the provinces, and fed on aromatic herbs to give them a fine flavor. One such garden in Dijon is said to bring in to its proprietor several thousand francs a year.

Many Swiss cantons also contain large snail gardens, where they are reared with great pains. They are not only regarded as a great delicacy, but are considered very nutritious. Hygienists state that they contain seventeen per cent of nitrogenous matter, and that they are equal to oysters in nutritive properties.

Snails are also extensively used as an article of food in Austria, Spain, Italy and Egypt, and the countries on the African side of the Mediterranean. Indeed, the habit of eating snails as food has existed in various parts of Europe for many centuries.—Ledger.

FROM A CHILD'S POINT OF VIEW

If the idea of the teachers of Christianity is to bring the Deity into the daily life of the pupil they have been eminently successful in the case of a little girl living on the South Side. She has taken her Sunday-school lesson most literally.

"Jessie," she said to her elder sister a few days ago, "you ought to turn your toes out."

"I do," replied the other, indignantly, and then she qualified her assertion by adding, "most of the time."

"Well, you ought to do it all the time," said the younger. "God doesn't like to see you walking round with your toes turned in."—Chicago Post.

PLACES WHERE CORAL IS FOUND

The red coral which is used in jewelry, and which is known as precious coral, is mostly obtained in the Mediterranean, the Barbary coast furnishing the dark red, Sardinia the yellow or salmon color, and the coast of Italy the rose-pink. It is also found in the Red sea. None is found in American waters.

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SELECTIONS

POINTERS ON PAINTING

WHILE the ringing sound of the brick-mason's trowel and the echoing return of the carpenter's hammer is heard in all parts of the city, the painter, with his white suit of overalls resembling Joseph's coat of many colors, is in evidence. You can spy him on the house-top, on the upper round of his dizzily high ladder, on the staging in frout of upper stories of business houses, in windows, doors, etc.

A few pointers on painting are in evidence. The main point is to buy good paint. The best is the cheapest. Taking into consideration the length of time good paint lasts over a poor quality, the saving is at least one half of the purchase price. The spring or autumn is the best time of the year to do outside painting, when the weather is not too warm nor too cold. The woodwork is in a good condition to receive the paint, and the drying process is not too rapid nor too slow. Select a day following a good rainstorm if possible; this will prevent the dust from spoiling the work.

The first thing to do is to apply a coat of strong shellac to all knotty and sappy places; sandpaper rough places, and then apply your painting coat. For the priming coat use yellow ocher and raw linseed-oil. Take great care that every portion of your work is thoroughly covered with the primer. When this coat is dry go over your work and putty all holes and cracks, leaving the surface smooth.

For the second and third coats use the best of white lead and zinc mixed with boiled linseed-oil and turpentine in proportions of seven parts oil to one of turpentine. Make your color with tints. Apply your paint evenly, with a free brush, and be sure and cover every spot. Let each coat of paint become thoroughly dry before applying the next succeeding one. If you do not, the paint is liable to crack or blister. No rules can be given to guide you as to the selection of colors. The situation of the building and the surroundings will have much to do with this. Endeavor to attain harmony between the body color and the trimmings.—Architect and Builder.

OPIUM IN THE PHILIPPINES

What water is to the caribao opium is to the Chinaman. Unless the Chinese were allowed opium the belly of the army might starve and the rifle want for ammunition. Every Chinaman whether in the supply-train or in the hospital corps is not a "John," as he is in the States, or a "boy," as he is in the English settlements in China, but a "Cheeno;" and the "Cheeno," like the caribao which he drives, prefers to live on the country if we would allow it. But Uncle Sam in his goodness of heart brings rice out from Manila for him, while he leaves undisturbed, to be returned to their future owners, such stores as the insurgents have not burned. A little rice and a few smokes a day and a "Cheeno" manages to keep pace with the caribao, and at other times bear burdens that would break a Filipino's back. The Yankee drivers do not understand his language and he does not understand theirs. The teamster swears and gesticulates, and the Chinaman "saveys" the second or the third, if not the first, time what is wanted. If he gets lazy and lolls under the shade of a cart he is sure to be up by the time that the "boss"—he knows that much American English—is within striking distance. From what they have seen in the hospital corps our officers are convinced the Chinese under white officers will make fine soldiers. They will follow the white doctor into the most dangerous places on the field. Without the white man's moral support they yell and run. When one cried out in his dream at one o'clock in the morning, two thirds of our caribao-drivers thought that the Filipinos were upon them. In their fright some jumped into the river. Our soldiers in fishing them out forgot the discomfort of being awakened and nearly bursted their sides with laughter. But they have cause for their fears. After squeezing all his money out of a thrifty Chinaman, the Filipinos sometimes shave off his queue or sometimes hang him.—Collier's Weekly.

THE POWER OF NIAGARA

"The power of Niagara," says Professor R. B. Owens in "Cassier's Magazine," "has been estimated at about 7,000,000 horse-power—greater probably than the physical force the whole human race is capable of continuously exerting. At present about 350,000 horse-power is to be developed on the American and Canadian sides. or about five per cent of the total power available—not enongh to perceptibly diminish the flow over the falls. However, should the whole be utilized, leaving the rocky bed dry and bare, we would but be substituting a wonderful cataract of etheric energy for the splendid flow of gravitational matter so justly famed. Which spectacle would present greater beauty would depend upon the individual. To those who trace in imagination the course of a beam of sunlight, as it buries itself in the ocean, rises in cloud, and falls again in graceful shower over grain-field and vineyard, filling brook and swelling river, and finally tumbling through mighty turbines and silently streaming from the polished slip rings of stately dynamos, bursting again into wholesome sunlight, to brighten the homes of hundreds, the substitution would but be the completion of a full cycle of usefulness and beauty."

WHAT IS THE RAREST UNITED STATES STAMP?

The question is often asked, what is the rarest stamp among the issues of the United States? The highest price ever paid for a single specimen of this country was $4,400, which sum was given for the famous ten-cent stamp of Baltimore, issued by the postmaster of that city in 1845. The design shows the autograph of President Buchanan, with the value below. There are but few copies in existence, and it may truly be said that it is the rarest and most valuable postage-stamp in America.

Prior to the sale of this celebrated specimen the highest price paid was $3,000. This was for a fine copy of the twenty-cent "St. Louis," which at that time ranked as one of the rarest American stamps. Shortly after it was sold, however, others were found, and the price has dropped considerably.

There are a great many United States stamps ranging in value from $500 to $2,000, among which are the Beaumont, Uniontown and Madison (Confederate) Provisionals, and the Brattleboro, Millbury and New Haveu postmasters' stamps, all of which are extremely scarce. Such rarities as these are seldom offered for sale, and when by chance one of them comes upon the market there are always many collectors ready and willing to pay full value for it.

In the way of finding rare stamps there are great possibilities for those who have access to old letters and correspondence between the years 1843 and 1865. The early postmasters' Provisionals were issued in 1845, 1846 and 1847, and the rare Confederate stamps in 1863. Besides these there are many old issues of regular United States stamps that are rare, and bring good prices when sold.

The most valuable stamps in the world are the first issues of the island of Mauritius, a small British possession off the coast of Africa. Although between twenty and thirty are known, the last sold brought more than $5,000 when offered in Paris about a year ago.—San Francisco Post.

WOMEN AS BRICK-MAKERS

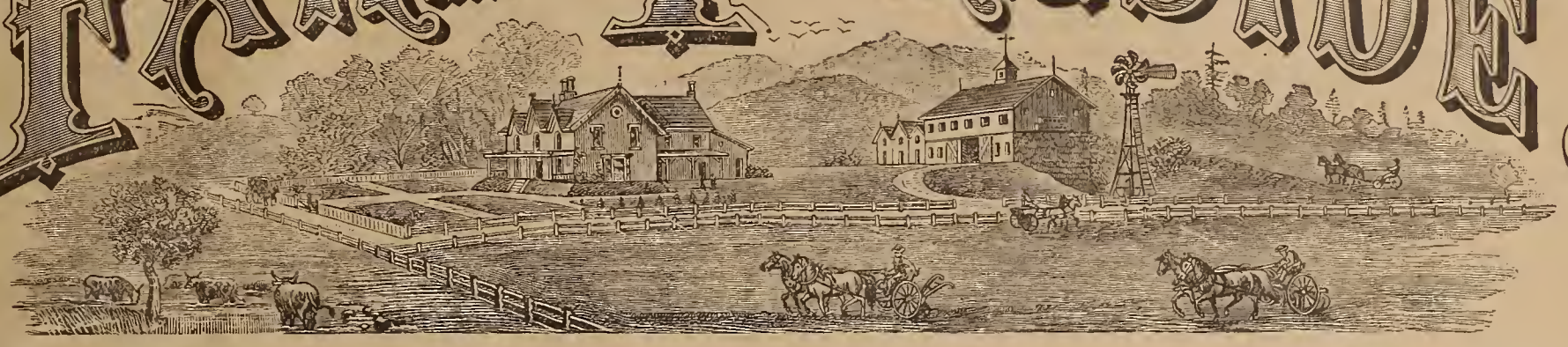
About the last industry in which one would expect to find women is that of brick-making. In the fields around Stourbridge, England, the clay in which district is the finest in the world for resisting high temperatures, many girls and women are employed. On the pit-banks, hammer in hand, selecting the clay and removing from it ironstone and other impurities, pushing along wagons laden with the valuable earth, carrying great masses of wet clay, pressing the worked clay into large molds by means of the bare feet, or making brick in the ordinary way, each "lass" attended by a little girl known as a "page," who acts as a carrier-off, and lastly, packing the fired brick into railway wagons and canal-boats—in all these places and at all these and other duties are women engaged.—St. Paul Dispatch.

ONCE WAS ENOUGH

This is one of General Miles' stories: In the Confederate army Longstreets' corps was making a night march. About four o'clock in the morning, when every one was worn out, a Georgia regiment stopped. A Georgia soldier put his rifle up against the tents on the other side of where Longstreet was.

"Well," he said, "this is pretty hard—to fight all day and march all night. But I suppose I can do it for love of my country." He continued, "I can go hungry. I can fight. If need be I can die for my country, because I love my country. But when this war is over I'll be blowed if I'll ever love another country!"—Woman's Journal.

FARM AND FIRESIDE.



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A COLORADO HARVEST-TIME

BY H. A. CRAFTS

COLORADO by reason of its exceedingly dry climate has a most ideal harvest-time. The farmer is seldom troubled with rains, and his principal source of anxiety is the too rapid ripening of his crops, for this same dryness of climate matures a crop very soon after it has attained its growth. If it were not for the liberal use of labor-saving machinery it is probable that large quantities of ripened crops would go to waste, but in the use of modern appliances the Colorado farmer is up to date. So that with continued fine weather, the employment of plenty of hands and machinery, the harvest goes merrily forward. The Colorado summer is usually a succession of bright sunny days, with light, shifting winds, while the autumn is very much like an eastern Indian summer very much prolonged.

The Colorado harvest begins in June and ends some time late in the fall, for potato-digging lasts sometimes into November. The first crop ready to be garnered is alfalfa, and this, by the way, has become a leading crop in this state, being especially adapted to its soil, climate, system of irrigation and the needs of stock-feeders. It is an extremely prolific crop, yielding as it does three crops and sometimes four to the season from the same ground, and the yield ranging from six to eight tons to the acre. It springs up very early in the season, and by the middle of May the Colorado farmer is actively engaged in irrigating his alfalfa-fields. About the middle of June the first growth is ready for the mower. Then it is that the alfalfa-fields present in the rural landscape a beautiful appearance. They show in immense squares of dark green, and if let alone until in full bloom the green is mingled with a profusion of purple blossoms that throw off a very rich odor. Each field is a dense mass of foliage standing from three to four feet high, very even on the surface and with hardly a bare spot or place of stunted growth being visible. It is seldom that the fields are allowed to stand until the blossoms appear, for the reason that the ground needs to be cleared for the second crop, which sometimes starts from the roots before the first is harvested.

As soon as the alfalfa-fields are in condition to cut the mowers are started out in full force, and they are seldom allowed to stop during the daytime until the fields lie flat in the swath. Rain or shine they are kept going round and round, for if the Colorado farmer hesitated upon the appearance of a stormy-looking cloud he would be thrown sadly behind in his work, and the second and third crops would be continually hastening his footsteps. So he goes steadily on, trusting in Providence for good hay-weather.

In the harvesting of alfalfa the time-worn methods of the hay-field have nearly all disappeared. They are too laborious and expensive. After the alfalfa has been cut it is allowed to lie awhile in the swath. Then it is raked into windrows and permitted to lie awhile. Then the "go-devil" and stacker are set to work and the hay is tumbled into stacks in great masses. The Colorado farmer would laugh at the idea of a hay-barn as a totally unnecessary adjunct. The "go-devil" is, in fact, a gathering-rake with long teeth set low and nearly horizontal. They project forward in front of the driver some ten or twelve feet, and the rake is drawn by a pair of horses, one on each side. When the "go-devil" has received its full load the front of the machine is slightly elevated by means of a lever in the hands of the driver, and it is driven to the stack, where the load is received by the stacker upon a set of teeth almost the exact counterpart of those belonging to the "go-devil." Then by means of ropes, pulleys and an inclined track the load is elevated to the top of the stacker, the propelling power being a horse or pair of horses. On top of the stack two or three men put the hay in place with forks, and keep the stack in shape. Provided the hay is dry and well-cured when put in stack it comes out, even when left for several years, almost as bright and green as when put up. The second cutting of alfalfa is harvested during the latter part of July and first of August, and the third in September and October. As to feeding qualities the second cutting is considered the best of the three.

ALFALFA-HAYING—GO-DEVIL APPROACHING THE STACK

Ordinarily the grain-fields begin to put on a tinge of yellow late in July, and by the first week in August the harvesters are in full play, and there must be no delay, for wheat especially ripens rapidly, and if allowed to stand too long wastes badly from shelling. Then it is that the fields put on their richest garb, for the never-failing green of the alfalfa-fields is now interspersed with golden squares of ripened grain, all showing with fine effect under the soft autumnal haze. It matters not whether the grain be left in bundles as dropped from the harvester or gathered in shocks or indeed heaped in huge stacks; it seldom, if ever, suffers from storms. Nothing gladdens the eye more than a field of thrifty-producing wheat all put nicely in shock basking in the full tide of a Colorado sun.

Threshing is almost contemporaneous with the cutting. In fact, the first grain to be threshed is frequently taken in bundles from the ground, where it was thrown by the harvester, and hauled directly to the thresher. But, of course, there is not necessarily that great haste about threshing as there is about harvesting, for the grain keeps perfectly in shock or stack and can be threshed at leisure. So all through the long sunny fall months the shrill whistle of the thresher-engine can be heard coming across the yellow fields, rousing up the workers betimes in the morning and announcing meal and quitting time throughout the day. Nor does the work cease with the advent of the new year, but continues during the bright days of early winter. Nearly all the threshing is done by contract by outfits that move their plants from ranch to ranch, and thresh for so much a bushel. These outfits form one of the picturesque features of rural life, and when they move along the highways on their journeyings attract universal attention. Quite frequently the motive power is derived from a traction-engine that not only propels the machinery, but hauls it from point to point, the thresher, separator, coal and water vans and movable cook-house trailing slowly after it. Threshers find it quite a profitable business, and travel over the same territory year after year. Nor is it an unattractive occupation. It implies a free, open-air life, with plenty of hard work and just enough variety to keep up the zest of the thing. The cook-house is a kitchen, dining-room and sleeping-apartment combined. Sometimes it is presided over by a man and sometimes by a woman, mayhap the wife of the boss or of one of the crew. Each member of the crew carries his own bedding and sleeps sometimes in the farmer's bunk-house, barn or under a straw-stack, which is better than either unless it should rain, and even in that case there would be no serious discomfort.

POTATO-DIGGER AT WORK

Gradually in threshing machinery crowds out the human toiler. Formerly it took a man to feed in the grain, now they have the self-feeder; and still later came the automatic twine-cutter. It was not many years ago that it required quite a force of men to handle the straw, but first came the endless chain, which elevated and carried off the straw, but it was a little clumsy, and now comes the pneumatic straw-stacker, that blows the straw into empty space with a mighty air-blast generated from the engine. It is hung upon a pivot, and can be trained from point to point after the manner of a siege-gun bombarding a hostile city. With a good yield of grain and everything running smoothly an outfit can thresh out between 2,000 and 3,000 bushels of grain a day. From the thresher the grain goes to the farm granary, but more frequently to the city elevator, and all during the threshing season the country roads are lined with wagons heaped high with the garnered products of the soil.

Potato-harvesting is another interesting feature of Colorado husbandry. As in grain-harvesting it is nearly all done by machinery. The potato-digger, a cyclopean arrangement, drawn by from four to six stout farm-horses, thrusts its long steel fingers down into the mellow soil, and as it passes from side to side of the potato-field leaves behind it a trail of lusty "spuds." The picking, however, is, up to the present time, done by hand, and the "spud-picker" has become a character in Colorado farm circles. It is hard work, but commands good pay. But it would not be surprising if the inventive Yankee mind would soon contrive a digger that would deliver the potatoes to the hauler, all sorted, sacked, and the sacks tied up. The potatoes are sorted by a simple contrivance in the shape of a slatted toboggan-slide, down which the "spuds" are permitted to roll, the smaller ones falling through the meshes of the track, the larger shooting the entire length and landing in a capacious sack. Potato-raising has become a leading industry in Colorado, the single town of Greeley, Weld county, shipping as high as 10,000 carloads to market in a single season.

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WITH THE VANGUARD

IN HIS Pittsburg address, welcoming the returning Tenth Pennsylvania regiment on behalf of the nation, President McKinley said, in part:

"I am glad to participate with the families, friends and fellow-citizens of the Tenth Pennsylvania Volunteers in this glad reunion. You have earned the plaudits not alone of the people of Pennsylvania, but of the whole nation. Your return has been the signal for a great demonstration of popular regard from your landing in the Golden Gate on the Pacific to your home-coming, and here you find a warmth of welcome and a greeting from joyous hearts which tell better than words the estimate of your countrymen and their high appreciation of the services you have rendered the country. You made secure and permanent the victory of Dewey. You added new glory to American arms. You and your brave comrades engaged on other fields of conflict have enlarged the map of the United States and extended the jurisdiction of American liberty.

"Our troops represented the courage and conscience, the purpose and patriotism of their country. Whether in Cuba, Porto Rico or the Philippines, or at home awaiting orders, they did their full duty, and all sought the post of greatest peril. They never faltered. The Eighth Army Corps in the Philippines have made a proud and exceptional record. Privileged to be mustered out in April, when the ratifications of the treaty of peace were exchanged, they did not claim the privilege—they declined it. They voluntarily remained in the service and declared their purpose to stay until their places could be filled by new levies, and longer if the government needed them. Their service—and they understood it—was not to be in camp or garrison, free from danger, but on the battle-line, where exposure and death confronted them and where both have exacted their victims.

"They did not stack arms. They did not run away. They were not serving the insurgents in the Philippines or their sympathizers at home. They had no part or patience with the men, few in number happily, who would have rejoiced to have seen them lay down their arms in the presence of an enemy whom they had just emancipated from Spanish rule, and who should have been our firmest friends. They furnished an example of devotion and sacrifice which will brighten the glorious record of American valor. They have secured not alone the gratitude of the government and the people, but for themselves and their descendants an imperishable distinction. They may not fully appreciate, and the country may not, the heroism of their conduct and its important support to the government. I think I do, and so I am here to express it.

"The mighty army of volunteers and regulars, numbering over 250,000, which last year responded to the call of the government with an alacrity without precedent or parallel, by the terms of their enlistments were to be mustered out, with all of the regulars above 27,000, when peace with Spain was effected. Peace brought us the Philippines, by treaty cession from Spain. The Senate of the United States ratified the treaty. Every step taken was in obedience to the requirements of the Constitution. It became our territory, and is ours as much as the Louisiana purchase, or Texas, or Alaska. A body of insurgents, in no sense representing the sentiment of the people of the islands, disputed our lawful authority, and even before the ratification of the treaty by the American Senate were attacking the very forces who fought for and secured their freedom.

"This was the situation in April, 1899, the date of the exchange of ratifications—with only 27,000 regulars subject to the unquestioned direction of the executive, and they, for the most part, on duty in Cuba and Porto Rico, or invalided at home after their severe campaign in the tropics. Even had they been available, it would have required months to transport them to the Philippines. Practically a new army had to be created. These loyal volunteers in the Philippines said, 'We will stay until the government can organize an army at home and transport it to the seat of hostilities.'

"They did stay, cheerfully, uncomplainingly, patriotically. They suffered and sacrificed, they fought and fell, they drove back and punished the rebels who resisted federal authority, and who with force attacked the sovereignty of the United States in its newly acquired territory. Without them then and there we would have been practically helpless on land, our flag would have had its first stain and the American name its first ignominy. The brilliant victories of the army and navy in the bay and city of Manila would have been won in vain, our obligations to civilization would have remained temporarily unperformed, chaos would have reigned, and whatever government there was would have been by the will of one man, and not by the consent of the governed.

"For these men of the army and navy we have only honor and gratitude. The world will never know the restraint of our soldiers—their self-control under the most exasperating conditions. For weeks subjected to the insults and duplicity of the insurgent leaders, they preserved the status quo, remembering that they were under an order from their government to sacredly observe the terms of the protocol in letter and spirit and avoid all conflict except in defense, pending the negotiations of the treaty of peace. They were not aggressors. They did not begin hostilities against the insurgents pending the ratification of the treaty of peace in the Senate, great as was their justification, because their orders from Washington forbade it.

"I take all the responsibility for that direction. Otis only executed the orders of his government, and the soldiers, under great provocation to strike back, obeyed. Until the treaty was ratified we had no authority beyond Manila city, bay and harbor. We then had no other title to defend, no authority beyond that to maintain. Spain was still in possession of the remainder of the archipelago. Spain had sued for peace. The truce and treaty were not concluded.

"The first blow was struck by the insurgents. Our kindness was reciprocated with cruelty, our mercy with a Mauser. The flag of truce was invoked only to be dishonored. Our soldiers were shot down when ministering to the wounded Filipinos. Our humanity was interpreted as weakness, our forbearance as cowardice. They assailed our sovereignty, and there will be no useless parley—no pause until the insurrection is suppressed and American authority acknowledged and established. The misguided followers in rebellion have only our charity and pity. As to the cruel leaders who have needlessly sacrificed the lives of thousands of their people, at the cost of some of our best blood, for the gratification of their own ambitious designs, I will leave to others the ungracious task of justification and eulogy.

"While we give you hail and greeting from overflowing hearts we do not forget the brave men who remain and those who have gone forward to take your places, and those other brave men who have so promptly volunteered, crowding each other to go to the front, to carry forward to successful completion the work you so nobly began. Our prayers go with them, and more men and munitions, if required, for the speedy suppression of the rebellion, the establishment of peace and tranquillity and a government under the undisputed sovereignty of the United States—a government which will do justice to all and at once encourage the best efforts and aspirations of these distant people and the highest development of their rich and fertile lands."

AT THE annual meeting of the American Association for the Advancement of Science, recently held at Columbus, Ohio, Prof. H. T. Newcomb read a paper on trusts, of which the following is an abstract:

"The aphorism that 'competition is the life of trade' is accepted by the general public as an economic axiom, and is made the major premise of a syllogism of which the vital importance of perpetually unrestricted competition is an inevitable conclusion. To public opinion thus summarized the industrial progress of the nineteenth century has consisted very largely of a succession of exceedingly disquieting phenomena which are suggested by the terms factory system, trades-union, corporation, consolidation, combination, railway pool, and the more recent term of indefinite significance, 'trust.'

"Up to the period that may be roughly marked off as having begun with 1870 there had been a great development of the factory system. Factories had increased in size, railways had developed and had been consolidated into extensive systems. labor had formed itself into trade associations, corporations were numerous and controlled great wealth, but all of these institutions were separate. The new period is characterized by more comprehensive combinations, by railway pools, unions containing workmen of all or many trades, of manufacturing establishments combined in 'trusts.' The latter name survives, though the legal entity to which it was properly applied has become obsolete. The early trusts were created through the transfer of the property of various establishments to trustees who issued trust certificates to the original owners, and sometimes gave mortgages, also, upon the property placed in trust by each.

"These organizations met great popular opposition, and were found exceedingly vulnerable to legislative attacks. They lasted long enough to impress upon capitalists the advantage of consolidation, and were then superseded by gigantic corporations, organized to take over the property formerly belonging to separate individuals, firms or smaller corporations. Popular opinion attaches to these new corporations the incident of monopoly, but in so doing is never quite accurate. For example, we hear much of trusts in the iron industry, but twenty-five per cent of the furnaces are operated independently of each other, while the remaining seventy-five per cent are controlled by fourteen separate organizations, all bitterly antagonistic to each other.

"The phenomena suggested have been the product of natural causes, are all closely related. and the latest was indicated by the earliest. To explain these relations it is necessary to examine the nature of industrial competition, and especially to consider the modifications which it has undergone as the result of the introduction of machinery. A theoretically simple classification of industries depends upon whether they conform (a) to the law of diminishing returns, (b) to the law of constant returns, or (c) to the law of increasing returns. The facts which determine the place of a particular industry under this classification belong to its technique, but the results are of the utmost importance among the postulates of economics. Technical evidences, available to the economist, indicate that all industries pass or may pass through successive states in which they conform respectively to the law of increasing, of constant and of diminishing returns.

"When an industry is in the first state each establishment tends to increase its output, and as such increase—other things being equal—reduces prices, the process must eventually crowd out those who produce under the least favorable conditions. The position of marginal producers is therefore unstable, and such industries tend toward monopolization in the hands of the single producer whose cost per unit of production is lowest. Industries which now conform to the law of constant, or to that of diminishing returns, have reached these states in nearly all cases before the establishments have grown to the size which would permit them to supply the entire market. Machinery has extended the application of the law of increasing returns, and thus tended to remove industries from the competitive field.

"Capitalistic combinations are, therefore, performing a useful public service, though there remains an inquiry as to the distribution of the beneficial results. Such combinations should tend to decrease prices to consumers, to increase the demand for raw material, and therefore the price, to augment wages, and ameliorate the condition of employees, and there is some evidence that they have done so. It is clear that while they tend to the centralization of industrial control they tend also to the diffusion of industrial ownership. The latter tendency would be more notable were it not for the popular attacks upon these combinations and the danger of adverse legislation.

"The process of industrial development involves continuous readjustment and rearrangement. Capitalistic combinations have naturally tended to expedite the necessary changes. The temporary evil results have therefore been more acute in their consequences, though they are doubtless sooner over than they would be under a simpler competitive system."

THE advance in the retail prices of beef has caused no little discussion whether or not it is based on conditions of supply and demand. There can be no doubt that the demand is increased by the wide-spread prosperity of the country, enabling the people to purchase more animal food.

In regard to the supply Secretary Wilson says:

"For various reasons the number of meat animals in the country has been growing gradually less for several years. Hard times forced people to economize by using less meat. The result was a smaller demand for live stock with a lowering of prices, which in turn led stock-raisers to grow fewer animals. Large losses from disease and exposure last year also had some effect in the same direction.

"Here is a statement by the division of statistics showing the number of cattle other than milk-cows, of sheep and of swine on January 1st for ten years past:

	Cattle.	Sheep.	Swine.
1890	36,849,024	44,336,072	51,602,780
1891	36,875,648	43,431,136	50,625,106
1892	37,651,239	44,938,365	52,498,919
1893	35,954,196	47,273,553	46,094,807
1894	36,608,168	45,048,017	45,206,498
1895	34,364,216	42,294,064	44,165,796
1896	32,085,409	38,298,783	42,842,759
1897	30,508,408	36,818,643	40,600,276
1898	29,264,197	37,656,960	39,759,993
1899	27,994,225	39,114,453	38,651,631

"It is noticeable that the decrease begins as hard times pinched. The number of sheep increased somewhat during the last two years, and that was probably due to the fact that many persons substituted mutton for beef. It will be observed that since 1892 the number of cattle has decreased nearly ten millions, or about twenty-seven per cent, but it must also be remembered that the population of the country has been increasing. The number of sheep has decreased nearly eight million head, or about sixteen per cent, since 1893, while the swine since the high-water mark of 1892 have fallen off nearly fourteen million head, or more than twenty-six per cent. . . . If the prices of meat continue high the farmers in the corn belt will take to raising live stock. It will pay them better than raising the raw material. They will transform some of their grain-fields into pasturage and feed their cheap corn to the cattle."

Water Cure for Rabies That cases of hydrophobia are rare, very rare, is generally admitted. Yet some of the people of Buffalo and vicinity have been almost scared out of their wits by what they imagined to be an epidemic of rabies. I would uphold the local authorities, board of health, etc., and our own state commissioner of agriculture in their efforts to protect the people, not only against the bites of mad dogs, but not less against their own fear. It must be a torture worse than death to be couscious of having been bitten by a dog suspected of having the hydrophobia, and to live for days, weeks, months, in fear of a disease and a certain death so terrible. In times of danger it is a good thing to keep dogs muzzled or chained. And if that epidemic of rabies were to result in the killing of nine out of every ten dogs in the country it would be a blessing to all. We have far too many worthless curs in the land. But what a folly, uay, crime, to kill a dog that has bitten a person and is suspected of being mad. The probabilities are that the dog was just mad enough to bite, or suffering from some ordinary dog disease, without having the real hydrophobia. Such dogs should be shut up in a safe place or safely chained, and then watched. If he gets over the disease, the bitten person may feel at ease about the consequences of the bite. If the dog dies under symptoms of the real malignant disease, then there is danger for the bitten person, although even then there is only a small chance of his or her taking the disease. It is claimed that only one person in a thousand that is bitten by a supposedly rabid dog dies from hydrophobia. It is a wonder, however, that many of them do not die from the shock and from the horror of the terrible fate that may be waiting them.

* * *

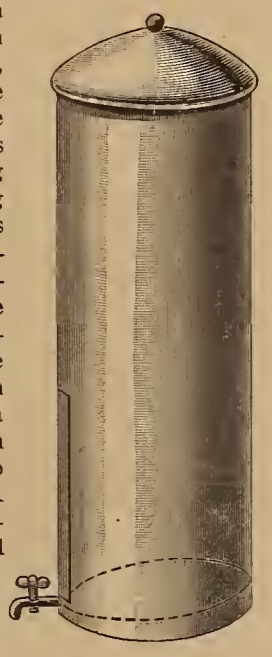
I see it stated that a certain Dr. Kinnear claims (in "Medical Record") to have found a sure cure for hydrophobia, even after that is well developed, in a hot-vapor or Russian bath. The symptoms of the disease are said to leave, and leave for good, at a temperature of one hundred and twenty-seven degrees Fahrenheit. Editor Fowler ("New York Farmer") comments on this claim as follows: "Dr. Kinnear's method is entirely sensible; and if any one has blood-poisoning from any cause, the Russian bath of vapor or the Turkish bath of hot air is the best way out. Such things do not cost much, while Gibier (who manages the serum-injecting resort in New York) charges what the traffic will bear. By the way, there is nothing new in the hot-bath treatment; it was practised at least forty years ago, and I never heard of a failure." I remember very distinctly when this treatment was recommended not only for hydrophobia, but also for tetanus (lock-jaw) and for various other minor diseases, especially rheumatism. All this seems to give additional testimony in favor of the vapor bath mentioned by me in an earlier issue. I know nothing of the safety or effectiveness of the Pasteur method, but I fear it. It is not a pleasant thing to be squirted full of the poisonous serum, and if we can find a cure that is so much easier and safer, and also cheaper, then why torture people with serum injections?

* * *

Cows During the Hot Season Just now the fact is very vividly impressed on my mind that it is much easier to manage cows during the winter than during the summer. All winter long we feed a certain ration of cut corn-stalks and various grains (chopped), bran and oil-meal. The cows are safely in the warm stable, in greatest contentuent, no flies or anything else bothering them, and the flow of milk is steady and strong. Just at this time the stables are too hot for the poor animals' comfort, and the atmosphere outside too full of flies, while the pastures are dry and dusty. We see again, but too late, where we missed it. We should have provided more patches of oats and peas for green feed to take the place of the abundant pastures of June and July. I believe that during these hot days the cows should be kept in well-ventilated, darkened stables from which the flies are driven out by spraying with any fly-repelling mixture. Then if they are fed with fresh-cut oats and peas, all they will eat, the flow of milk will continue full and free, and the cows will prove a source of profit right along. Fortunate, indeed, is the farmer who has a well-filled silo. There is uo reason why the cows should not have the same rations now as during the winter. They would do much better than if sent out in the pasture-field to be tormented all day long by the flies. Possibly at some time some one will give us a plan how to construct a silo suitable for only two or three cows. Any man having more thau that number has no justification for doing without a silo. Undoubtedly silage with bran and oil-meal is the ideal ration for milk-cows the year round. But as long as I work on too small a scale to have a silo I must provide such substitutes as green oats and peas; and to have them right along when needed a patch should be planted every few weeks until midsummer or even early fall. I have had nice cuttings of oats and peas before this as late as the middle of December.

* * *

A Water Creamery In many portions of this state, and probably of other states as well, the method of separating the cream by means of dilutiug the freshly drawn milk with cold water is becoming very popular. The diluted milk is set in deep pans or cans, and after twelve hours the skimmed milk is drawn off from a faucet at the bottom until only the cream is left in the can, and can then be poured off from the top, when the can is ready for washing or simply rinsing and refilling. This process is not patented nor patentable, although there may be agents traveling about the country who claim that they have a patent on some form of can, and try to collect royalty. A bulletin recently issued by the Cornell University experiment station comes to the following conclusions: "Several patents have been granted covering unimportant details of the construction of cans in which the dilution of milk with water is recommended to facilitate the separation of the cream. Any one desiring to use this process of doubtful utility is perfectly free to do so without let or hindrance from the holder of any patent right whatever. The Cornell University agricultural experiment station (Ithaca, New York) will esteem it a favor to be put in communication with any one who is demanding a royalty from persons who are dilnting their milk in order to facilitate the raising of the cream."



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With due respect for Cornell's learned men, and notwithstanding their opinion, that "these cans are not separators in the universally accepted sense of that term, and cannot rank in efficiency with them, that they are even less efficient than the best forms of deep-setting systems, such as the Cooley creamer, and that they are no more efficient than the old-fashioned shallow pan, but require perhaps less labor." I am quite sure that the plan has merits which will not fail to recommend its use to many. We must not forget that many farmers have to do entirely without ice. We use the Cooley creamer system, which requires a great deal of ice duriug the seasou. When you have no ice, but can get fresh, cool water from well or spring, and when saving in labor counts for much, the dilution process may be just the thing you want. It is conducive to cleanliness, and in most cases results in a better quality of butter than is commonly made by the shallow-pan system. This higher grade of butter alone more than compensates for the small loss of fat (if there is any); and the diluted milk is just as good for the hogs as the ordinary skim-milk, as we find we have to add water to the slops anyway in order to have swill enough for our hogs. The cans may be made on the same general plan as those used by the Cooley creamer, only larger. The tin should be rather heavy to be durable. The bottom is inserted slantingly toward the front. Then there is a glass gauge to show when the milk is all ont, the cream alone remaining in the can. An ordinary cover will do. T. GREINER.

SALIENT FARM NOTES

Buy Coal Early During the past sixteen years I have made it a rule to fill my coal-house to the roof in September or early in October. At that time the roads are dry and hard and the hauling good, while one is sure of obtaining dry coal and at a price as low as it is likely to be any time during the year. When the roads are dry and hard one can haul forty to fifty bushels as easily as he can ten when they are soft, and then there is a great deal of difference in the weight of dry coal and wet coal—a difference of one hundred to two hundred pounds in a tou—and that is an item worth considering. Many a time have I seen farmers hauling ten or fifteen bushels of wet coal with four strong horses when the roads were axle deep. They had paid two to four cents more a bushel than I paid in the fall, the coal was not half so good as mine, it weighed almost one fourth heavier, while the actual cost of hauling it was more than ten cents a bushel.

* * *

When one has a big coal-house full of coal he is in a position to smile at strikes and lockouts. Many times have I seen people compelled to burn dirty cobs raked out of the pig-pen, saw and hack up old stumps and rails and even burn good posts because a strike had stopped the supply of coal and they were out. I've never been caught in such a fix, and never expect to be. No live man need be. All he needs is a dry shed that will hold a supply sufficient for eight or nine months, and to fill it now. In summer when everything is dry one can rake up a pile of cobs in the yard that will do to make the short, lively fires needed most days, but in winter one needs coal, and must have it to keep warm. Fill up the coal-house uow, and see that the coal is dry when you buy it.

* * *

Apply Manure in the Fall One March day several years ago I was spreading a load of manure on land intended for corn when a man who had made a success of market-gardening came along. "Have you much of that manure?" he asked. I said there was probably twenty loads of it. "Four twenties are eighty," he remarked. "If you had spread that manure last October or November one load would have done you as much good as four will now. Experience taught me that fact. Always apply barn-yard manure in the fall if you want to get the full value of it the next year." I have since learned that he was right. Manure applied in the fall is not wasted—washed away and obliterated, as many old farmers contend—but it is converted into humus and made available for the succeeding crop, while manure that is applied in spring is not "digested" until after the crop has about completed its growth, then it has no need for it. About all one gets out of spring-applied manure is a rank growth of weeds late in the season. The only land upou which I would apply mauure in spring is that intended for winter wheat. By fall the manure would be available for the wheat-plant and a vigorous growth would be certain.

* * *

Last spring a tenant-farmer wrote me that there was at least a hundred loads of manure in the barn-yard of the farm he had leased, and he wished to know whether it would pay him to apply it to the land he would plant to corn. I informed him that it would provided he could lease the farm for another year. A few days ago he wrote again stating that he had applied the manure and plowed it in, and that all he had gotten from it was weeds and grass, and to keep them down he had been obliged to cultivate his corn six times. Now he writes that he has leased the farm another year, and asks if I would sow wheat in the corn, which will soon be ready to cut. I would most certainly. The land is reasonably clean and well filled with available fertility, and without a doubt the wheat will make a strong growth this fall, and should yield a very fair crop next year.

* * *

Now is the best time of all to apply manure to the garden and to any spot where a strong and vigorous growth is desired next season. I would put on the manure now, or early in October, and either turn it under shallow or leave it lie on the surface. Next spring the land can be plowed deep and the decayed manure will be well mixed with it. In my own practice I can see little difference between leaving it on the surface and turuing it under, unless it be fresh and coarse. Coarse manure will decay more completely if turned under three or four inches than if allowed to lie on the surface all winter.

It is a good idea to select the spots now where the early vegetables, such as radishes, lettuce, etc., are to be grown next year, and to cover those spots with about four inches of fresh, strong manure. This is allowed to lie there until the beds are to be dug over for planting, when the soil will be found as rich and mellow as any one could desire. The available fertility has leached into the soil, while the covering has protected it from the heavy rains that beat down and pack naked soils. When planting-time comes rake off the coarse litter, loosen the soil with a fork and sow the seed, and you will be pleased with the fine growth the plants will make. Asparagus and rhubarb should be covered the same way—four to six inches with strong fresh manure about the first of November. This is left on until growth begins, then the coarse litter is just moved off the crowns of the plants and left to decay beside the rows or hills.

* * *

Hoboes Almost every farmer is called on at divers and sundry times by the hoboes who wander up and down the land living on the contributions of the generous soil-tiller. Some of these chaps ask for something to do to earn a meal, and it will be found, generally, that these are workingmen in hard luck, and it is a good idea to encourage their desire to keep their hand in, so to speak, or it might forget its cunning. Just at this time it is not difficult to find them a good job. Offer the next caller a corn-knife or brush-scythe, and indicate about how many weeds he may cut from the fence rows and corners for a generous supply of bread and milk. If he is a worker he will lay the allotted number low in a short time. If he is afflicted with "that tired feeling" he will quickly decline the favor.

* * *

Weeds Despite all one can do the weeds will grow. Those scarcely noticeable this week will be as high as one's head next, and the only thing we can do is to cut and slash early and late. The best tool I have ever used for this purpose is a short scythe—not a brush-scythe; they are too heavy—a blade about twenty inches in length attached to an ordinary snath. If these cannot be obtained get the shortest scythe to be found. In cutting large, hard weeds cut upward and with the heel of the blade. If one is careful weeds of any size can be cut without bending the blade or turning the edge.

* * *

Grading Roads It has been demonstrated time and again that spring or early summer is the proper time to grade roads. Grades made at that season become packed hard and solid during the summer aud remain firm enough to shed water in winter. Every man who has done any work on the roads knows this. And he knows, further, that all grades built in the fall of the year remain soft until the following spring, and if we have much rain or freezing and thawing during the winter they become veritable beds of slush and remain so. Knowing these things it would seem that people who have to pay the cost of building and keeping up the roads would insist on having the work done at the proper season; yet I see farmers—the men who use the roads and pay for keeping them up—on every hand busy "working the roads." The overseers tell me they could not get them out to "work out their tax" any earlier, and as it has to be done, "according to law," they are doing it now—making trouble for themselves. Many times I have heard that the farmers are their own worst enemies, and seeing this road-butchering going on one is almost compelled to believe it.

FRED GRUNDY.

THE VALUE OF BRAN

Experimenters are studying the question of compressing wheat-bran into bricks for export to Denmark and other Europeau dairy countries that buy American feeding-stuffs and then compete with American-finished products in the world's markets. Bran is especially useful for feeding in conjunction with corn-meal, which is concentrated and tends to "pack" in the stomach. It is a food rich in protein, and is known to contain a large amount of the nitrogenous element of fertility in soils. Wheat is known to be extremely hard on soil, and the chemist has found that most of the soil strength goes into the bran. Broadly speaking, therefore, the extreme folly can be seen of exporting bran and letting that much fertility go out of the country to enrich foreign lands, necessitating the purchase in lien thereof of artificial fertilizers of all kinds to keep up our own fertility of soil.

GUY E. MITCHELL.

OUR FARM

FARM THEORY AND PRACTICE

HANDLING THE POTATO CROP.—There are more bushels of potatoes grown in the world than there are bushels of wheat or corn. In the United States the uumber of bushels of potatoes is not nearly so great as that of the leading grains, but a full crop for us means about three bushels for each inhabitant, or over two hundred million bushels. The primitive way of harvesting the crop was with a hoe or fork, and a big acreage is yet dug by this method. When the rule was to check the hills, placing them three feet apart, a good hand would dig an acre of potatoes in three or three and one half days, picking the potatoes into baskets and emptying them into piles that would be covered with straw or grass, or into wagons to be drawn from the field. The expense of digging an acre of checked potatoes was three or four dollars, according to the yield and the condition of the ground. I have used cheap and costly diggers, but if I could now have potatoes harvested for three dollars an acre I should not want to own a digger of any kind. "The man with a hoe" can get them clean, does not bruise them, and leaves the teams free for other work. But potatoes yield best when the hills are comparatively close, and many growers want ten thousand hills on an acre. The planters do not check the hills, and drilled potatoes cannot be dug profitably with hoe or fork. Hence the need of diggers drawn by horse-power, and of these there are many kinds, good, bad and indifferent.

* * *

CONCERNING DIGGERS.—The very cheap digger is a sort of double mold-board plow, with a few steel prongs to sift the dirt away from the potatoes. I have used one such digger with fair satisfaction under some conditions. If the potatoes do not "straggle" in the hill, if they are not very deep iu the ground, and if the surface of the ground is clear of grass and weeds, such a digger does good work on level land. Thousands are in use, and are labor-savers. But potatoes should not be planted at the surface, and if the planting is fairly deep and the ground loose the lowest tubers in the hill are too far below the surface for the cheap digger. It must be run so deep to prevent cutting the potatoes that it has too much loose soil mixed with the tubers to handle all satisfactorily. The soil that is thrown to each side and that which sifts back into the furrow covers the potatoes, and pickers do not do good work. With such a digger I have fouud it necessary to run twice in the same row to get a clean job of work, but this is expensive. The cleanest digger is one that elevates all the ground that is in the row, carrying up the soil, potatoes, vines and any grass that may be in the row, sifting the soil through screens into the furrow, throwing vines and such stuff to one side, and then dropping the potatoes upon the ground that has been made level by the soil that has dropped back through the screens. Such a digger does clean work, and reduces man's labor to the miuimum, but the drawbacks are the costliness of the machine and the excessive power required to run it. In compact soil four horses find the work very heavy. Every grower must choose for himself, all depeuding upon local conditions, but it is my experience that the costly digger is the most nearly satisfactory, being the cheapest, everything considered.

* * *

USING BOXES FOR HANDLING.—Bushel boxes are a good investment for the potato-grower. If I were growing only an acre a year I should have these boxes, as they are serviceable in many ways on a farm. They hold a bushel of potatoes when level full, and can be tiered upon the wagon to any convenient height. Fifty make a good load when drawing potatoes from the field. The pickers fill that number and then hand them up to the driver of the wagon, who can unload and return the empties while the pickers fill fifty other boxes. If the potatoes are not for immediate shipping or need sorting they may be placed in ricks at a convenient point and covered with straw, or, preferably, put into a dark shed that has a dirt floor, where the sorting can be done regardless of the state of the weather. In many sections it is the rule not to pick up any except merchantable potatoes, and thus save the labor of sorting at the rick or shed. The boxes are always convenient, no matter what disposition is to be made of the crop. The trucker needs the boxes when drawing the potatoes to market, as they prevent bruising and lighten the work of delivery. Different varieties can be kept separate. In delivering bulk potatoes to a car one man can unload as quickly as two with basket and shovel. The boxes are handy in the spring when seed is to be cut and taken to the field. A basswood box is light, and if properly made and cared for will last for a dozen or twenty years.

* * *

SAVING SEED.—Most growers south of the fortieth parallel of latitude get the best results from seeds grown farther north. The potato is most vigorous in a cool latitude, and does not start its buds as early in the spring as southern seed. The objection to dependence upon northern seed is the difficulty in getting the varieties wanted. There are scores of varieties more or less extensively grown, and these are sold too often under whatever name is most popular. When seed can be gotten true to name, it is my experience that a change of stock is desirable if it comes from a locality especially adapted to this vegetable. Many growers hesitate about using large potatoes for seed on account of the expense. If thrifty "seconds," grown from large seed, can be gotten, they may make as big a yield as cuttings of large potatoes; but the fact should be unquestioned that the continued use of small seed causes degeneration. Too many stalks are produced, the sets are too numerous, and the crop is found to be uudersized. In order to secure fewer sets from such seed a few growers thin their potatoes, but the work is laborious, must be done at a certain time for best results, and will be neglected by most growers. Potatoes for seed save best when placed in small piles or narrow ricks late in the season, covered deeply with straw, and then with soil. When the earth covering has frozen through to the straw another heavy covering of straw should be given to retain the frost in the soil. The potatoes should be examined in the spring, and removed before they begin to sprout. Vigorous seed is the first prime essential in successful potato-growing.

DAVID.

TUNIS SHEEP

I want to say iu the beginning of this article that I have no sheep to sell. I am ready to give any information iu regard to history or the breeding of the Tunis sheep, but it will be useless for any one to write me to buy sheep, for I have none to spare.

HISTORY

Tunis, formerly known as Carthage, is a mountainous country in uorthern Africa, and at one time stood first among the most powerful nations of the earth. The mighty Hannibal led the brave Carthagenian army over the snow-covered Alps, and for seventeeu years held high carnival among the flowery fields of Italy, in defiance of the combined Roman legions.

Such is the native land of the Tunis sheep. They are a species of the broad or fat tail breed, and for more than three thousand years they have been bred and raised in all purity among the mountains and valleys of Tunis, Egypt, Morocco and Algeria. They are first mentioned in the Bible in Leviticus iii. 9. About twenty-three hundred years ago Herodotus describes them as being in Syria and Palestine, and having a tail one cubit (eighteen inches) in width. From time immemorial they have been the leading variety of sheep bred and raised throughout the Barbary states in northern Africa and in Turkey, Persia and Arabia. In Turkey these sheep are bred partly for the fat of the tail, which sometimes weighs fifty pounds or more, aud is manufactured into a kind of butter that is greatly relished by the people of that country. In Tunis these sheep have been bred more for wool and mutton and are far superior to any other bred of sheep ever introduced into northern Africa.

In 1779 the first pair of Tunis sheep were brought to America. They were placed under the care of Judge Richard Peters, of Belmont, near Philadelphia, Pennsylvania, who bred and raised them pure for many years with remarkable success. They proved to be very hardy and prolific, but fine merino wool was selling at $2 a pound, and mutton sheep were poor property. Judge Peters sent a number of the Tunis sheep to North Carolina, South Carolina, Virginia and Georgia, where they were bred and raised in considerable numbers until the Civil War, during which they were about all destroyed.

DESCRIPTION

In color young lambs are generally red or fawn. As they increase in age the wool becomes a light gray, but never black and never pure white. The faces of the rams are generally brown or fawn, and the ewes brown to light fawn, with frequeutly a white face or white forehead; legs brown and white. In form they are of good length, with round, straight body, small, tapering neck, with a deer-shaped head and nose, pendulous ears and short legs. They carry the head erect, and are quick, strong and active. They are of medium size and fine bone. Mature rams weigh from 150 to 200 pounds; ewes, from 120 to 150 pounds. They shear from six to ten pounds of good medium wool. They are very hardy and prolific. The ewes will bring two crops of lambs a year, or they will bring lambs any month in the year the owner may desire them to come, which is one great advantage they possess over other breeds. But the raising of two crops of lambs a year cannot be continued long without injury to the flock.

I have uever seen one with a running nose at any season of the year. They are the cleanest sheep I ever saw. They are very gentle and yet full of life and vigor. They are hornless, but occasionally a ram will have horns. I have never raised but one that had horns.

TUNIS EWE AND LAMBS

The tail of the Tunis lamb when first born is the same length and size as lambs' tails of any other breed of sheep with the exception of loose skin at the upper end next to the body. The tail can be docked long or short the same as other breeds, but if the tail is not docked or ouly the little end docked it will grow to weigh five or six pounds on mature sheep. From the time they are four or five weeks old they can be easily fattened. They readily learn to eat and quickly respond to feed and good care. They produce the finest of muttous. They are the most numerous breed of sheep in the world, unless it be the Merino.

They seem to be especially adapted to hot climates, but will stand any climate. They are possessed of many good qualities.

Our experience in breeding and raising the Tunis sheep has been very interesting.

J. A. GUILLIAMS.

ARTESIAN IRRIGATION

Artesian irrigation is becoming one of the most independent systems practised throughout the arid West. The low valleys having good watersheds and natural basins for catchment areas have immense underflow channels that can be tapped by sinking pipes from the surface. There are hundreds of valleys in the twenty states comprising the irrigated realm where artesian wells can be made successful reservoir builders. The number of such wells now reaches several thousand, and the flow ranges from five gallons to five thousand gallons a minute. It is estimated that a flow of four hundred and forty-eight gallons, equivalent to one second foot a minute, will furnish enough water to irrigate three hundred and and twenty acres—one half section, or two Western homesteads.

Wells are sunk by boring or drilling, using pipes from one to six inches in diameter. When water is struck it immediately rises to its level, and in some instances spouts up several feet above the surface. The flow continues steadily throughout the entire season, uever diminishing except when numerous wells are put down in one field. If a tap is put on the end of the pipe the flow can be placed under control. The water has a high temperature, and never freezes during the coldest winter. Some owners of wells have pipes carrying water through their poultry-houses, thereby keeping an even temperature throughout the winter and assuring plenty of eggs and healthy fowls. The well-water makes excellent ponds for ducks and geese, and supplies horses and cattle with warm water during the cold winter days.

The great James river valley, of South Dakota, is one of the largest artesian well sections of the world. In southern California the wells are more certain sources of water-supply than many of the irrigation canals. Salt Lake City, Utah, has an extensive artesian well field, where six-inch pipes are sunk within a few yards of each other and a large canal is supplied from this source. In central Washington the wells are used for general irrigation. The water is held in reservoirs and sold at a specified rate for inch or cubic foot flow. It hastens germination of seeds because of increasing both temperature and moisture, and assists trees and vines in making vigorous growth in early spring, when most needed to withstand the ravages of pests and dangers of disease.

In sinking wells for artesian water one must notice the contour of the country, and ascertain whether the watershed will justify the supposition that water can be obtained; but in most mountainous sections the underflow is abundant and pressure great.

JOEL SHOMAKER.

EFFECT OF NITRATE OF SODA UPON TURNIPS

In some sections of the country where turnips are grown for stock-feeding nitrate of soda is commonly applied as a top-dressing when the plants are about three weeks old. As it is known that the presence of nitrates in excessive quantities renders the food more or less harmful to the animal systeu, the question was often asked, "Are these turnips as healthful as those not so grown?" and a series of experiments covering two years was conducted to answer it.

Plots of roots were grown with and without this fertilizer. In each case large returns were obtained from the plots fertilized with the nitrate, as was expected. The roots were fed to sheep of the same age, development and weight, with the result that the animals fed the nitrated turnips formed less meat than those given roots grown without it. It is, however, worthy of note that the roots were eaten in about equal amounts of nitrated and non-nitrated by the different pens of animals, so that the difference gained in flesh by the sheep fed with non-uitrated turnips is about offset by the larger yield of the nitrated roots, since these latter could be fed for a longer time. Upon the other hand, if this were followed in practice there would have to be considered the extra hay and grain fed during this time. In some cases the yield was found large enough to allow for three weeks' extra feeding.

During the experiments much trouble was experienced in maintaining the feet of the animals in a healthy condition, in all cases the difficulty being greatest where the stock was fed upon nitrated turnips. Upon the whole, then, the matter stands in favor of the roots grown without nitrate of soda, at least as far as sheep are concerned.

RUST PREVENTIVE

The best thing I have seen or used to keep plows, cultivators and all other farm implements from rusting is to use petroleum and lamp-black about the consistency of paint. Put it on with a brush or swab. If the implement is dry and clean when it is put on it will never rust as long as the paint stays on. The beauty of it is that you do not have to clean it off. If it is a plow, all you need to do is to hitch to it, stick it in the ground and go ahead.

REUBEN WELLER.

NOTES FROM GARDEN AND FIELD

THE FRUIT INDUSTRY.—For many years we have been imagining that "the bottom was soon to drop out of the fruit business." We had already more fruit than we could sell at the old high prices, while every year a new lot of trees, planted during the years of good demand, were coming into bearing. We expected such an outcome here, especially in the growing of Bartlett pears. We have a great many young orchards in this vicinity, and with all of them bearing freely the aggregate crop must be very large. Yet even now there is no surplus in sight. The Bartlett crop has found ready buyers at slightly increased prices, and the outlook is for a small crop of apples, with a stroug demand and remunerative prices. We seem to have made one mistake in our calculations and prophecies. We have uot taken into consideration the running out aud dying out of the older trees. Comparatively few young orchards have been planted during the last eight or ten years. The cry of overproduction had frightened the would-be planter. The younger orchards planted just before that time take the place of the old trees that are now beginuiug to give out. But that is about all. Neglect is beginning to tell. The crops are not gaining in volume as we had expected and feared. I believe that more trees just now are giving out and actually dying than are replaced by recent planting. At the same time the population has increased, and the taste for fruits has become much more general. People have found out that fruit is a good thing, and they will and must have it. In short, the cry of overproduction has spent its force. A fruit famine has almost become more likely than an oversupply. Such conditions as we had in 1896, in the apple business, may not very soou occur again.

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This vicinity is one of the foremost apple-producing sections of the state and the United States. It looks like a vast orchard. Yet look at the trees! They are in bad shape—neglected, blighted, often dying, and not a young orchard planted in years. And I cannot see for the life of me how the older ones can be restored to their former thrift and usefulness. There seems to be but one remedy—the ax. The fundamental mistake that has been made by those who planted these orchards—namely, unreasonably close planting—is now showing its doleful results. In many of the apple orchards the trees stand only thirty feet apart. The branches of adjoining trees are interlaced and interwoven. You can't get in between with a ladder, nor is it possible to spray as spraying should be done. There is no chance for a ray of light to reach the grouud anywhere between the trees. Insects have full sway. Diseases attack the trees without hindrance. If there is any fruit it remains under-sized, gnarly, insect-eaten, colorless. Some of my neighbors have tried to find a remedy in trimming the trees severely. I believe that the only thing to do is to cut down every other row diagonally, or in many cases every other row and every other tree in the remaining rows. Then plow and cultivate the ground, and spray.

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NEW PLANTINGS.—Very few people are going to apply that remedy, however, and I can see no salvation for the old orchards otherwise. So instead of an increase in apple production we are going to have a steady decrease. Now, if ever, is the time to begin setting out new apple orchards. But whoever undertakes it must try to avoid the mistakes which were made and are still being made in the planting and management of the older orchards. Set apple-trees not less than forty feet apart each way. Plant hoed crops, such as potatoes, beans, cabbage, or strawberries, currants, gooseberries, etc., between the young trees. Never, never sow grain in an orchard, unless it be oats and peas to be cut green. Use manures freely for the hoed crops, and give the best of cultivation right along. Spray the trees with Bordeaux mixture and paragrene two or three times every season. After six or eight years of such management quit growing any crops in the orchard except fruit. Plow and harrow in the fore part of the season, but let the orchard aloue after July. You might sow crimson clover iu midsummer, and this may be allowed to winter-kill, or at any rate be plowed under in spring. That is the way to raise good apples, and to make them pay big profits. I still believe in apples and apple-growing if thus managed.

EARLY PEAS.—I am still in doubt whether it is very profitable to raise green peas for market or not. There are two items of expense which seem to be so considerable as to cut the profits down to a very low point, or wipe them out altogether. One item is the cost of seed; the other, that of picking. Seedsmen charge us $4 a bushel and upward for the varieties that are best to plant. In theory the problem is very simple. Get a start and grow your own seed. For some reason I have never yet succeeded in growing my own peas for seed. Our people usually gather the bulk of the crop, and the leaviugs are hardly ever considered worth harvesting and threshing. I will have to turn over a new leaf and plant a patch purposely for seed. It is true, with the half a dozen or more different varieties we think we must have in order to have change and a succession right along, it is fussy work to save seed of them all. Yet this for market-garden purposes is hardly necessary. We may be able to buy the Alaska for earliest at a reasonably low price. We can also grow them as easily as any other pea if we want to have our own for seed. The wrinkled peas are a little more difficult to grow, aud the seed is therefore more expensive. I would want at least three varieties—Nott's Excelsior, Horsford's Market Garden pea and the Telephone, with its large pods and large peas. The last mentioned usually sells at a higher figure in the markets than the others. But I would hardly know which one of these to discard if I had to be restricted to three sorts. Thus we have three or four varieties of which it might be wise to grow our own seed. Of course, if the peas have bugs in them we must subject them to the bisulphid of carbon treatment; but that is a rather simple and inexpensive matter. Most of the peas we find in seed-stores are more or less bug-eateu.

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So loug as we only pick peas for our own table the labor cuts no figure. But when we wish to put bushels of them on the market the question is how to have it done without being obliged to pay as much or nearly as much for the job as the peas will bring in market. The pods of the Alaska are rather scattering, but the crop is planted very early, comes at a time when green peas are yet scarce and briugs a good price. Nott's Excelsior, and to some extent Horsford's, grow in clusters, so that the gathering is done much more quickly than in the case of the Alaska. The Telephone pods, on the other hand, while more scattering are so large and plump that they soon fill a basket. How delicious any of these peas are, too, when gathered before they get too old! We would not tire of them if we had them on the table two or three times a week. I like to have a small portion of young and tender carrots cut in small pieces cooked with the peas, and do not object to a little fried (fat) pork or fried pork gravy as a flavoring. I believe that we could and should have peas in the home garden for a much longer period than people ordinarily have them. We had several nice messes of Horsford's Market Garden pea in August; of course, we had the different sorts all through June and July, and I am only sorry we do not have any more now. I noticed there was some call for them on the part of my customers even as late as August, and I believe they would find ready sale right along. Some years we can grow peas very easily all summer and fall, but in other years the plants mildew badly during hot weather. Of course I have tried the much-advertised Gradus, or Prosperity, pea. I fiud it very early, and the pods and seeds very large. With me, however, the pods are not as well filled as I would like, and the plant does not seem prolific. So for the present, and while the seed is yet high priced, I do not feel justified in planting or recommending it for market. It is of fine quality, and a good thing for the amateur.

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As to amount of seed to be used for a given length of drill I have not yet changed my earlier opinion that heavy seeding is necessary if one wants a full crop. I would not plant more than two hundred feet of row with one quart of seed of any of these varieties. This sows the smaller peas of the Alaska variety more thickly (in number) than the larger ones of the wrinkled sorts; but the Alaska can stand closer in the row than the others. T. GREINER.

INTENSIVE GARDENING INSTITUTE, of Philadelphia, says, "We are working away at experiments in strawberries that can hardly fail to produce results surprising to the growers of this favorite berry. Are not the great questions for the farmer just now packing, shipping and marketing?"

THE NORWAY MAPLE

Unquestionably the Norway maple (Acer plantanoides) is, all things considered, the most desirable of the numerous shade-trees that line the beautiful streets of Washingtou, D. C., or adorn its many extensive and handsome parks. The tree has a more vigorous growth than the sugar-maple, and the branches are more closely set on the trunk of the tree, and the wood is so strong and pliant that the most severe wind-storm rarely breaks one of its branches. In this respect it is superior to the sugar-maple and many times so to the ordinary red or silver maple which is so generally planted throughout the United States. The Norway is even more beautiful than the sugar-maple. The head is somewhat roúnder and its leaves are larger and thicker. The leaves in autumn turn sometimes to a fine yellow, and at others to a brilliant red, and are always well colored. Any reader of the FARM AND FIRESIDE who has any friends living in Washington should ask them to kindly gather a few of the seeds which are now beginning to ripen, to gather a few dozen and send them by mail, so that they can be planted this fall, or kept in a moist place and planted next spring. This maple would form an excellent wind-break on the western prairies and exposed places. It cannot be too highly commended as a most useful ornamental tree. W. M. K.

LATE BEARING

Complaint is sometimes heard that apple orchards eight or teu years old do not bear any fruit. The fact is the trees are not old euough. Trees can be stunted aud dwarfed into beariug crops before this age, but trees ten years old, if well cultivated and fed, should be busy making heavy wood growth, and much wood growth and fruiting do not go together. Many varieties do uot begin to bear much until twelve years old. Such trees can be forced into earlier bearing by stopping cultivation and seeding down to grass, but it is certainly better to keep cultivating aud feeding until the tree gets ready to bear, when it will be so much larger and its capacity so much greater that the size of the crops will more than compensate for the wait. Such trees, too, will be longer lived than trees which have been stunted and forced into early bearing. Orchards should be cultivated up to the middle of summer each year, and by the time they are twelve years old the trees will want all the ground. GUY E. MITCHELL.

ORCHARD AND SMALL FRUITS

CONDUCTED BY SAMUEL B. GREEN

Mold on Cherry-leaves.—G. S., St. Marys, Ohio. The leaves inclosed are covered with a mold which commonly attacks cherry-leaves. It is most abundant during close, sticky weather, and in closely shut-in places during July and August. Where the trees have a good circulation of air it seldom occurs abundantly. It may he prevented hy sprayiug with Bordeaux mixture, but in good locations it is seldom sufficiently injurious to pay for so doing.

Willow Cuttings—J. I., Rancher, Montana. Willow cuttings may be safely planted at any time in autumn after the middle of Septemher. Make the cuttings from one half to one inch in diameter and sixteen inches long, and put them in so deep that not over one inch comes ahove the surface. It is hest to put them in a somewhat slanting position, and pack the earth around them very solid. On the approach of winter cover the whole top of the cuttings with earth ahout three inches deep. In the spring rake off this covering so the tops will show. If the ground is too dry to work well in the fall it cannot he done to advantage, hut in moist soil it is the hest time to set out cuttings.

Leaf-blight.—E. D. W., Hodges, Tenn. Your pear-trees are affected with what is known as leaf-hlight, which may sometimes entirely defoliate the trees and even attack the twigs or the fruit, as is commonly the case with the Flemish Beauty, wheu they cause dark-colored spots and cracks. The treatment of this disease should begin in the spring, when the first pears should be sprayed with Bordeaux mixture as soon as they have developed. This treatment should he repeated at intervals of two to four weeks until the middle of summer. In case treatments are needed as the fruit nears maturity, the copper-carbonate solution should be used in place of the Bordeaux mixture, as it does not discolor the fruit.

Lichen on Apple-bark.—W. H. M., Cass Bridge, Mich. The specimen of hark which you sent is covered with what is known as lichen, which is closely related to the mosses. It is not what is referred to as scale, by which is meant a small iusect which becomes fixed in place and has a hard, scale-like shell. The lichen on your trees indicates that the trees are not very thrifty, although this is probably not the cause of the trees dying. The canse is more likely to he found in the horers in the trees, or in the lack of fertility in the soil, or hoth. However, it is a good plan to remove these lichens, and it can he successfully done hy spraying with Bordeaux mixture, which acts as effectually on this as on any other fungus disease.

Twig-borer—Bone-black—A. C. R., English Turn, La. The twigs which you inclosed are infested with some twig-borer, the only remedy for which is cutting off and hurning the infected portions while the worm is still in them. This insect is seldom very injurious, and generally does little more than to give the trees a rather vigorous pruning. I do not think that you will be troubled with it much after this year, or at the latest, after the second year.——The bone-black sample which you inclose is a good fertilizer, and what is known as spent hone-black is the hone-hlack which has been used up hy refineries and largely sought after hy fertilizer manufacturers. It is used in making superphosphate, which is probably the hest way to treat it if it is to be put on the market. For home use it can be hrought into good condition for manure hy mixing it with fermenting stahle manure, hy which process it becomes softened and is made quite soluble. I think if you have any considerahle quantity of it you would have no trouhle in selling it to fertilizer manufacturers, if there are any of these in your vicinity.

Bunches on Raspberry-roots.—C. H. W., Conneautville, Pa., writes: "I have a field of London red raspberries. Many plants are dying. On digging them up I find hunches on the roots from the size of a pea to the size of a hen's egg. What is the trouhle and the remedy?"

REPLY:—All trees and plants that have hunches on the roots should he regarded with suspicion. They do not always indicate the presence of injurious parasites, but frequently do so. Nematoid worms have injured many berry-bushes, and their presence is indicated hy hunches on the roots. But they are not always seriously injurious, as I know from an experience of a few years ago with a blackherry-patch that was badly infested with them, hut has since horne good crops. In your case I should be careful not to use the plants for setting elsewhere, and would destroy them all if they appear weak and unfitted for producing fruit. I wish you would forward to me by mail a few of the hunches for examination. The bunches on apple-trees might be caused by nematoids or hy woolly-aphis; on grapes they are generally caused by phylloxera, which is the grape-root louse. On clover, peas, heans, etc., we commonly find many small bunches or tubercles which are helpful rather than injurious.

Best Strawberries—Raspberry and Blackberry Seedlings—Budding.—J. L. R., Oden, Mich. Prohably you are as likely to succeed hy planting Warfield and Haverland strawherries as any, hut since these are both of theu pistillate sorts, every third row should he of Bederwood or some other desirable perfect flowering sort.——Raspberries and hlackherries are easily raised froui seed. The herries may be crushed in twice their hulk of dry sand and placed in a hox and huried in the ground outdoors until spring, when they should be sown in a fine bed or in a hox in the house. They will generally fruit well the third year. The reason why this is not generally doue is hecause seedlings vary widely, and very few—perhaps not one in a thousand—are as good as our hest-named kinds. They are raised generally from suckers, tip layers or root cuttings. Early in the spring is the hest time to plant them.——No, the huds will not dry up in July and August, which is the time to bud, providing the plants are in good condition and the huds well inserted. Budding is sometimes done in the spring. In each case the buds are put heneath the hark, and the sap flowing freely keeps them moist if they are well wrapped in place. In Iowa and Minnesota, where the climate is especially dry in the seasou for hudding, much care is taken to wrap and cover over all the wounds made with the tying material used.

Blossoms Falling and Trees Not Fruiting—Hop-seed—C. S. Y., Wolf Creek, Mont., writes: "Kindly tell me what I can do to my young apple-trees to prevent the blossoms falling off instead of fruiting. The trees are healthy-looking, and I see no signs of insect pests, hut they do not fruit. Both last year and this they blossomed, hut the stalks soon turned yellow, dried up and fell. I would like to know the cause, and if I can prevent it. I see girdling is recommended for non-fruiting. Would it do in this case, or would cutting the roots answer?——Also please tell me how long hop-seed remains in the ground before it comes up. I planted some in the spring of 1898, and see no signs of it yet. I hought the seed from a good, reliahle firm."

REPLY:—It is often a good deal of a mystery why trees flower hut produce no fruit. It may he due to lack of proper pollenization, to late frost, continued rains at flowering-time, drying winds, etc., and some varieties seem disposed to starve the flowers and fruit when they are young and growing rapidly. In your case girdling would prohahly do no good, since all it is used for is to induce the trees to produce fruit-buds, which your tree does anyway. I think you had hetter be patient, and that they will come into bearing before long. If, however, they are all of one variety, that of itself may be reason enough for their not fruiting.——The hop is usually increased by cuttings of the most healthy old shoots. Two huds are required—one heneath the grouud, from which the roots start, and one ahove the ground, from which the top starts. When grown from seed many of the plants will be unfruitful, as there are both male and female plants. The seed should start the first year after being planted if not too dry.

THE POULTRY-YARD

Conducted by P. H. JACOBS

HAMMONTON, NEW JERSEY

FEEDING IN YARDS

POULTRY in confinement must be fed differently from those which have a free run of grass or woodland, in which latter they revel, hunting over all the leaves, and scratching away, around and under old logs for their favorite grubs and bugs. If you have not made it a business to watch your chicks and hens carefully you do not realize what a large amount of grass and green food they will eat in a day when it is at hand and when they have not been overfed with grain or scraps. Fowls need coarse food or something that gives bulk as well as nutriment. Even though you feed the confined birds the same identical food they obtained for themselves on a good run it would not be the same, as they cannot select for themselves and they would still lack the exercise so necessary for their health, and, therefore, in confinement the same food would be too much for them. This is why successful raisers of poultry in confinement always throw the grain to their fowls in straw, thus compelling them to work for it. Exercise is necessary for their health, but if the food is composed more of nitrogenous elements and less of the carbonaceons (especially of the oils and fats) there would not be so many diseases to confront. There are people who pamper their chickens, both old and young. Corn is useful in the poultry business, as lard or bacon is in the kitchen, but not as a regular diet. If you want to fatten poultry or warm them in cold weather, or when a hen is poor, and on that account not laying, and needs a richer food, corn is excellent, but should not be given almost exclusively, especially when fowls are confined. It is not difficult to incur a serious loss, where a good number of fowls are kept, by injudicious feeding. All kinds should have a sufficiency of food without being overfed. If the birds are kept in a state of semi-starvation the hens lay bnt few eggs, and those intended for killing become so attenuated that a very considerable outlay is necessary before they can be brought into proper condition for the table, and will lack tenderness and delicacy. To feed too liberally is wasteful, and in the case of laying hens decidedly objectionable; for a hen when it becomes very fat ceases to produce np to the average, and is subject to various ailments. Full-grown fowls should have just as much as they will readily eat and no more. Barley, either in whole or in ground state, is fairly economical used either alone or in combination with other food. Oats and oatmeal are of especial value for fattening for the table. Pieces of bread and vegetables of all kinds may be ntilized, and scraps of meat chopped up rather small are of great value in feeding fowls shut up in small yards where they are unable to obtain worms and insects. Potatoes boiled and mixed up with a sufficient quantity of coarse bran, when scalded to form rather a a stiff paste, are useful for helping out the corn.

MAKING GOOD WHITEWASH

Some kinds of whitewash will remain, while other kinds seem to soon disappear. It requires pure white lime to make good whitewash, and a person must know how to slake lime properly or he will fail to accomplish his object. There is too much guesswork. It is not an uncommon thing to place lime in a vessel and put less water on it than is required, which causes the lime to slake granular and lumpy, though sometimes too much water is used and the lime is "drowned." A large number of people consider lime as "lime" the world over. They do not take into consideration that most of the lime found in the United States contains more or less carbonate of magnesia, which neutralizes the adhesive qualities when converted into whitewash. Pure white lime should be selected, and should be slaked several weeks, or even months, before it is used. It is a good practice to slake lime in the fall for either whitewashing or plastering, which should be kept in the hydrate state in air-tight vessels during the winter, being sure to keep the lime covered with water and kept from freezing. When the time comes for whitewashing it is then thoroughly slaked and ready for use, retaining its adhesive qualities, which have been improved by the time given it. To slake lime properly three pints of water to one pound of lime are required. Lukewarm water is the best, which is not always to be had when slaking large quantities of lime. If slaked in a box or vessel put the necessary quantity of water in first, then put in the required amount of lime. During the progress of slaking it is well to cover the box or vessel, and at the same time it should be stirred occasionally for the purpose of placing the lime so that all will receive its share of water. One precantion is not to put the lime in the vessel first and put the water on by turning it from a hydrant or pouring it in with buckets. If you do you will slake the lime granular and lumpy.

POINTS ON POULTRY-HOUSES

It is difficult to design a poultry-house that will answer for all. Those who go to the expense of constructing elegantly designed and elaborately built poultry-houses may adapt them nicely to the eye, but the hens may not be comfortable, and will not reward the builder for his pains. In winter the main requirement is warmth, and a low ceiling, dry floor and tarred-paper walls, costing but very little, will induce better results than the expense of large sums to suit the conveniences of the poultryman. And this is the error all fall into—that of constructing the poultry-houses for their convenience—when the real object should be to consider the welfare of the hens first, and to make the preferences of the owner regarding his convenience a secondary matter. While one may object to a low ceiling, because of lack of convenience, the hens may prefer it to be just the reverse, as it will be warmer; and though one may wish the door nearest the dwelling-house, it may thus be on the north side, allowing the cold blasts to creep under it and chill the birds. It may be preferred to have a particular location for the house, and that it face a point of the compass corresponding with some other building or object, but the hens may prefer dry ground and the southeast, so as to get the sun's rays, as well as protection from the northeast storms. In building a poultry-house these matters should receive their proper attention as well as the cost. The best poultry-houses are those that are usually built according to location and for the convenience of the fowls.

KEEP THE BEST

Only the best fowls should be retained, as there will be an improvement every year due to careful selection. Every poultry-raiser keeps, or onght to, a portion of his stock for his especial purpose of breeding. These are the finest specimens of his flock, carefully selected for their good qualities, and set apart for the perpetuation of their race. Feeding the breeding-stock is a problem in itself and somewhat different from that set by the production of the greatest number of eggs or the obtaining of the greatest amount of flesh and fat. What the poultry-raiser especially desires to secure is not always the greatest uumber of eggs, but also eggs that will hatch the greatest nuuber of the strongest, most vigorous, healthiest and most useful chickens. To secure the result the feeding must be of a character to keep the fowls in vigorous health, for sickly fowls will be the progenitors of sickly chickens. Eggs from such will produce weak chickens, many of which will die before reaching maturity.

FORCING AND LAYING

If there is any mode of forcing fowls to lay when they are not laying it will be gratefully received by the inexperienced. Forcing does not depend so much on the amount of food as upon the management. When a hen lays an egg she produces something and will demand more food. If she lays she thus gets rid of the excess. But a hen that does not lay cannot stand forcing. For that reason it has been cautioned against feeding layers and non-layers together. "How many eggs should a hen lay" and "which is the best breed" is thus explained. Feed less corn and more meat and the breed will respond, and it matters not if the meat is raw or cooked—raw preferred—but even when fed on meat a variety of food should also be given.

GREEN BONES

A mess of green bones at least twice a week will always prove beneficial, as they provide lime for the shells and serve as a change. Some do not believe in feeding grain at all in the summer season, preferring to allow the hens to work. A pound of green bone cut with a bone-cutter, twice or three times a week, given to a dozen hens at night is better than feeding grain, as the hens nearly always come up with full crops when they are on a range. When in confinement in late fall or winter the green bone will continue to be of valuable assistance.

EXHIBIT YOUR BIRDS

There will be some of the largest poultry shows ever held in this country during the coming winter, and all who are interested should begin now to select choice birds for the exhibitions. Keep the young stock in good growing condition, and make up your mind that your birds are as good as any owned by others. Do not be frightened away by fear of competitors. Many persons who have fine birds fail to exhibit and then visit the shows to discover that they have fully as good birds at home. Aim to excel and endeavor to take the prizes.

NOTES FROM CORRESPONDENCE

REMEDY FOR LICE—PRESERVING EGGS.—I wish to contribute something for the benefit of the readers of the FARM AND FIRESIDE. To get rid of small brown chicken-mites boil cedar limbs and foliage in a large kettle. Make a strong decoction, wash the hen-house thoroughly with soapsuds, and then wet it all over, roosts and all, with cedar-water. To keep eggs fresh for December market, gather road dust free from manure and lumps, have it perfectly dry, and put one layer of dust and one layer of eggs, being careful uot to let them touch each other. Always gather eggs the day they are laid and pack away with the small end downward and keep in a dry place. The cooler, the better. You will have fresh eggs for a high price. They will not freeze in the dust.

Brownfield, Ill. L. C. S.

TESTS OF BREEDS.—I saw in the notes from correspondence in a recent issue that "A. B.," Bangor, Pa., had thirty-two Plyuouth Rocks and White and Brown Leghorns, and as this is the first year for poultry for myself I should be very glad to learn which kind are the most profitable and from which could one obtain the most profit. I have commenced with full-blooded Brown Leghorns this year, and I think they are the most profitable, as they are good hustlers and are said to be great layers, so I thought I would give them a test next year and sell off my old hens which I have this year, as they are mixed chickens, and keep only the full-blooded Leghorns. As soon as they commence laying I will give a report at the end of the year. I purchased a remedy of a man, and when my chickens become droopy I shall commeuce doctoring them myself, so I will not lose any. I shall be glad to hear from others who have had some experience in raising Leghorns and which breed is the best for layers. I do not let my chicks run with a hen, but raise them by hand.

Cantril, Iowa. F. J. S.

INQUIRIES ANSWERED

Feeding Meat.—J. N., Troy, Ohio, writes: "In feeding meat to fowls where fresh meat cannot be obtained at a reasonable price, will ground meat serve as a substitute?"

REPLY:—It would be difficult to find a substitute for fresh meat, but the grouud meat (animal meal) will serve as a partial substitute.

Hardy Breed.—M. R. E., Hydeville, Vt., writes: "I have Minoreas and Light Brahmas, but wish to keep only one kind. I prefer the one that will stand a severe cold climate, and I am advised to retain the Brahmas, but would like some advice."

REPLY:—There is no breed that can surpass the Light Brahmas in hardiness and adaptability to a cold climate.

Linseed-meal.—E. G. S., Corry, Pa., writes: "I understand that linseed-meal is an excellent food for fowls. Should the old or new process meal be used?"

REPLY:—The new process, which removes the oil more completely, should be preferred, as the oily portions are not so desirable for poultry as the nitrogenous and mineral clements. Feed it twice a week, allowing a heaping teaspoonful for each fowl, mixed with bran and corn-meal.

Soft-shell Eggs.—W. B. T., Ocate, Okla., writes: "Why do my hens lay eggs with soft shells? They are not too fat. They have the run of the place, and are thrifty, being Plymouth Rocks. The eggs also fail to hatch."

REPLY:—As a rule, eggs having soft shells are layed by fat heus, and it is probable you are mistaken in supposing them not fat, though it may also be due to lack of lime in the food. Feed bone-meal and bran and omit grain from the ration.

THE BOY ON THE FARM

No. 2

One of his greatest difficulties is his manners and the natural result—his general appearance. Not in one case out of a hundred can the young man who has spent the first twenty-five years of his life in the average farm home overcome in the next quarter of a century his rustic traits so as to be a polished gentleman. This polish is the result of early and constant training; but he can begin as a boy to practise and observe some things which will take off the roughest corners.

Probably his table manners are the first which trouble him. There are few boys who, when away from home, have not refused to sit at the table because they knew they would be so awkward that they could not be comfortable. They said they were not hungry, while, in fact, half famished; and if finally prevailed upon to be seated, they probably dropped their fork or knife, their elbows hit those on both sides of them, and they took no pie because they knew they could not eat it with their fork.

Home is the place to overcome these difficulties, though members of the family may notice and even criticise the attempt. Every boy can practise and acquire a few general principles of table etiquette. Under no circumstances should he carry food to the mouth with the knife. He should not eat pie from the hand, but break it in small pieces on the plate, and as a piece is broken convey it to his mouth with the fork. There are to-day many men of good table manners who, if they would be frank, would admit that pie tastes much better when the whole piece is taken in the hand and each mouthful bitten out. But table etiquette will not allow it, and the boy who does not want to attract attention when away from home should break himself of the habit.

At all times he should teach himself to keep his elbows as near the side of his body as possible. With most boys the tendency is to stick out both elbows as far as they will reach, thus occupying as much space at the table as two boys should. He usually butters a whole slice of bread, takes it in one hand and bites out mouthfuls, each bite leaving a semicircular notch varying in size according to the size of his mouth. Only a small piece should be buttered and then eaten. If he will keep his mouth closed when chewing he will soon break himself of the noisy habit of "smacking." And under no circumstances whatever should he ever use a toothpick at the table.

The boy who has corrected himself of these few particulars has laid a foundation for further improvement which he will himself make by observing those whom he knows practise correct table etiquette, and in a short time he will be at ease at any table where he will be seated.

He will or ought to have hands tanned and rough. I say ought, because if he does his share of the work they will of necessity be in this condition. This troubles many boys who want to make a decent appearance, but they magnify the difficulty or the importance of it. Though their hands are tanned, large and rough, they can at least be kept clean when the day's work is done. A nail-brush can be gotten for twenty cents, and with it and a knife the dirt can be removed from the sides and from under the nails, and soap and water will clean the rest of the hands. This, understand, is after the day's work is done, for no one who knows what he is talking about will say that the boy can keep his hands clean during the day. This particular thing of keeping the nails clean is so much neglected even by those with soft and white hands that the boy who does attend to it makes a favorable impression; and any sensible person is more favorably impressed by clean hands that are rough, large and tanned than by hands that are unclean, though small, soft and white. But never clean the nails in public, and never under any provocation scrape the top of the nail with a knife.

He can at least clean his teeth once a day. One who has never noticed this will be surprised, when he does observe, to find how many people neglect this one thing; and they are not all on farms, either.

Don't eat hard candy or shuck peanuts at a lecture or any meeting of a similar nature. This is one of the common mistakes of boys, and one of the worst. And any one who has ever been thus disturbed knows how one who has committed the offense is regarded. Don't swear or use tobacco. It will not raise you in the estimation of any one whose good opinion you desire. There never yet was a boy who did not know enough to do both. It is no unusual accomplishment, and hence can't benefit you. If, when you have reached the age of twenty-five, you then have a desire to smoke, I say it is all right for you to do so, though many will disagree with me in this; but the average boy does it because he thinks it is smart, while it is exactly the reverse.

When it is necessary for the boy to go in front of any person, he should ask to be excused; and when with his mother, sister or any other lady, in entering a room or building, he should allow her to enter first, and if the door is closed, should open it and then stand aside for her to enter ahead of him. He can do these little things at home, so that it will become the natural thing for him to do, and in time he will do them unconsciously; otherwise he will sometimes make blunders which will make him blush in shame for years after when thinking of them. When he meets a lady acquaintance on the street, or is with a friend who recognizes one, he should raise his hat to her. This is probably one of the hardest things for the farm boy to do. He knows it will be so pronounced that every one will notice it.

But the fact remains that there is no place so good for practising these things as at home. Mistakes will be made there, but they are not so humiliating. Good manners are the result of practice just as surely as is music, and there is a necessary element of time to be taken into consideration. There will always be a period of awkwardness, and it is best to have the first part of this period of blunders at home, where they are not so closely noticed, and hence not so humiliating. The boy who has a theoretical knowledge of these things, and thinks to practise them for the first time after he gets away from home, has a sad experience in store for him.

GENE Z. FIZZLE.

IRRIGATING GARDEN CROPS

I noticed in your issue of August 1st a communication from W. H. Jenkins on irrigation. Now, while his plan may be feasible, I believe the California way is better. He claims that by mulching between the rows it keeps the roots cool and moist, as they are near the surface. The better way is this: Plant the rows as near on a level as possible. When you wish to irrigate, make a ditch with a hoe or a horse shovel plow between the rows and turn the water in. Never wet the surface of the ground. If you use a garden-hose take the nozzle off, lay the end of the hose in the ditch and let the water run. By irrigating deep the roots will grow down. After the water has run several hours turn it off, and when it has all soaked into the ground level the ground. The water is thus all where it should be, and none escapes by evaporation.

W. E. HART.

USE PURE-BRED ROOSTERS

With a small flock of fifteen hens, which should raise during the season a hundred chickens easily, the use of a full-blood cock of some large breed will add one hundred pounds to those hundred chickens if allowed to grow to maturity. The extra hundred pounds of flesh will be laid on without any additional cost of feeding, for a scrub chicken eats as much as a full-blooded one. This gain can be made by the purchase of a single good rooster, and should not cost over $3 at most.

GUY E. MITCHELL.

EXTRACTS FROM CORRESPONDENCE

FROM NEBRASKA.—Oats will be a fair crop. The second crop of alfalfa now being cut is good. Corn promises a good yield. There never was a better prospect for sorghum and millet. Cows are worth from $35 to $50; fat cattle, from $4.75 to $5 a hundredweight; fat hogs, $3.80 to $3.90 a hundredweight. A few farms are changing hands at from $12 to $20 an acre. Corn is worth twenty-five cents a bushel.

G. M. J.

Superior, Neb.

FROM ARKANSAS.—I live in a picturesque bit of country in northern Arkansas. The land is rough and hilly, but very productive. Corn, oats, wheat, cotton, potatoes and all kinds of garden vegetables and fruits grow abundantly here. Stock is also raised to some extent. Poultry-raising is the chief work for the women. This is a good place for poor people to live, as land is cheap, and nearly every one can own a home of his own.

Beall, Ark. A. F. P.

FROM KANSAS.—Cherokee is the southeast corner county of the state, and is the banner county for the production of coal, lead and zinc. It is also a good farming country. Corn, wheat, oats, flax, cane and millet are the leading crops. All kinds of vegetables do well. There is a good market for everything that can be raised on the farm. The winters are generally mild, last winter being an exceptionally cold one. Land is fast changing hands, and the time is not far off when it will all be in the hands of corporations, on account of its mineral wealth. Columbus, with a population of 1,100, is the county-seat. Land is worth $25 to $50 an acre.

C. R. S.

Cherokee, Kan.

QUERIES
READ THIS NOTICE

Questions from regular subscribers of FARM AND FIRESIDE relating to matters of general interest will be answered in these columns free of charge. Querists desiring immediate replies, or asking information upon matters of personal interest only, should inclose stamps for return postage. The full name and post-office address of the inquirer should accompany each query, in order that we may answer by mail if necessary. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Queries should not be written on paper containing matters of business, and should be written on one side of the paper only.

Bermuda Grass.—L. L. K., Shuqualak, Miss., and A. S., Shop Springs, Tenn. Bermuda is a tropical grass, and rarely ripens seed in this country. It is usually propagated by cutting up the root-stalks in a feed-cutter, sowing them broadcast, and plowing under shallow. Southern seedsmen can supply the roots for planting.

Egg-plant for Cooking.—G. A. W., Spring Valley, Ohio, writes: "Please inform me how to tell when egg-plants are ready for use?"

REPLY BY T. GREINER:—At the time when the seeds begin to fill and mature the egg-plant assumes a rather dull color, and on the sunny side often turns yellowish. The egg is good for culinary uses just as soon as it has attained any kind of size, say from a goose-egg up, and so long as it has a bright purple color.

Draining Stable Floor.—F. R. M., Vienna, Va., writes: "I have an earth floor stable which needs filling up with new clay. The floor slants considerably away from the door, and in filling I want to put in pipes or some other drain for the liquid manure. Could you suggest some plan for this so I could save it, and also keep the stable cleaner?"

REPLY:—You may experiment with drain-tile put down under the filling of clay. But the usual way with clay floors is to use sufficient bedding to absorb all the liquid manure.

Tomatoes Failing to Set Fruit.—L. K. W., San Francisco, Cal., writes: "My tomatoes bloom all right, but after three or four days the stem cracks and the blossoms fall off. This is the case with all my vines. What can I do to avoid it?"

REPLY BY T. GREINER:—Sometimes an excess of moisture, and sometimes a lack of it, causes the blossoms to fall off rather than set fruit. There is also a possibility that the lack of some element of plant-food (potash or phosphoric acid) may be the cause of the trouble. I can suggest no preventive except good culture.

Onions at the South.—J. C. B., Murfreesboro, Tenn., writes: "Please name the best onion to grow in a large way for market—say to sow seed in the fall and take a crop of onions off in the spring. Will the potato-onion be of superior advantage to an onion that only grows one onion from the seed? Can you refer me to a large onion-grower that has an onion-house and as far south as you can?"

REPLY BY T. GREINER:—The potato-onion is considered one of the best and most profitable onions to grow at the south for northern markets. I do not know whether you could succeed in wintering such standard varieties as Dauvers' Yellow, which is one of the best onions for fall and winter, by sowing seed in the fall. Here we can only grow green (bunching) onions in that way. Most plants if thus wintered over and if they have escaped injury from the severe cold, will go to seed rather than make good marketable bulbs. I still believe that your best way would be to start plants of Prizetaker or Gibraltar under glass in January or earlier and transplant to open ground as soon as the season will permit. Who can tell us of an onion-house in operation in the southern states?

VETERINARY

CONDUCTED BY DR. H. J. DETMERS

To regular subscribers of the FARM AND FIRESIDE answers will be given through these columns free of charge. Where an immediate reply by mail is desired the applicant should inclose a fee of one dollar, otherwise no attention will be paid to such a request. Inquiries should always contain the writer's full address. Queries must be received at least TWO WEEKS before the date of the issue in which the answer is expected. Veterinary queries should be sent directly to DR. H. J. DETMERS, 1315 Neil Avenue, Columbus, Ohio.

NOTE.—Parties who desire an answer to their inquiries in this column must give their name and address, not necessarily for publication, but for other good reasons. Anonymous inquiries are not answered.

Paralytic Pigs.—M. D., Urbana, Ill. Please consult FARM AND FIRESIDE of August 1st, and several other recent numbers.

A Sick Bull.—C. W. H., Melrose, Ill. It is utterly impossible to base a diagnosis upon your very superficial description. Have your bull examined by a veterinarian.

Actinomycosis in the Tongue.—J. N., Spiritwood, N. D. What you describe appears to be actinomycosis in the tongue (so-called woody tongue), a disease which must be considered as incurable, at any rate where the morbid process has made as much progress as it has in your cow.

Warts.—J. W. B., Silverton, Ohio. If you will take the trouble to look over a few back numbers you will find your question repeatedly answered, because in nearly every number questions on warts have been answered.

Chorea.—E. G. B., Muscogee, I. T. Chorea, or St. Vitus' dance, in dogs is an ailment frequently remaining behind in cases of dog-distemper, neither becoming fatal nor terminating in perfect recovery, and especially if of long standing must be considered as practically incurable.

A Tuberculous Cow.—L. L. S., Port Clinton, Ohio. According to your description it looks to me that the cow you received in trade is a tuberculous animal, and therefore worse than worthless, because endangering human health and life. I know what the law ought to be, that any traffic in tuberculous animals should be strictly prohibited, and that a relentless war should be waged against that disease, which in so many cases is conveyed to human beings by milk and meat of tuberculous cattle, and probably kills every year more people than all other infectious diseases combined. But not being a lawyer I cannot answer your question, and have to advise you to consult a good lawyer.

A Serious Case.—W. R. W., Amory, Miss. Although it does not appear from your description whether the external opening leads directly into the nasal cavity or into a maxillary sinus from which the purulent discharge enters the nasal cavity, your case requires a thorough examination, made possible, perhaps, only by first performing a surgical operation. The examination must extend as well to the cavity of the mouth as to the nasal cavity and the maxillary sinus. Then if a treatment is resolved upon probably another surgical operation will have to be performed. As all this cannot be done from a distance I have to advise you to have the animal examined, and according to the result of the examination treated by a competent veterinarian.

Infectious Abortion.—M. E., Ogle, Pa. Your cows suffer from infectious abortion, a disease caused by an invasion of bacteria, and in your case undoubtedly introduced by that Jersey cow you bought last summer. It seems that now the premises where your cows are kept are thoroughly infected; therefore, if you have any more cows yet with calf, have them at once removed to a non-infected place where they will be out of danger if not already infected; thoroughly clean and disinfect stable and cattle-yard, wash the tails and the genitals of all your cattle several days in succession with a one-permille (1 to 1000) solution of corrosive sublimate in water, and if any further case of abortion should occur cremate fetus and afterbirth and irrigate the uterus of the cow that has aborted with a one-per-cent (1 to 100) solution of creolin in warm water. The place at which the abortion has occurred must be cleaned and be disinfected in a most thorough manner.

Spaying Heifers.—E. P., Osage City, Kan. The age at which to spay heifers depends upon the method chosen. If the operation is to be performed by opening the flank it should be done while the heifer is yet a calf, because then the ovaries are within easier reach, and the losses that occur are less heavy, at least in so far as a calf presents less money value than a grown heifer. If, however, the operation is to be performed through the vagina (Charlier's method) it cannot be performed until the heifer is nearly full-grown, because until then it will not be possible for the operator to introduce his hand into the vagina of the animal. Otherwise, I regard Charlier's method as the best and the least dangerous; I will, however, remark that if the possible losses, total and partial—the latter caused by adhesions produced between various parts in the abdominal cavity and more or less interfering with the process of digestion, and therefore resulting in unthriftiness and insufficient growth—are taken into consideration the operation of spaying female animals is of doubtful value from an economical standpoint. I can only recommend it if a female animal—cow or heifer—is a nymphomaniac, and has diseased ovaries.

Probably a Case of Tuberculosis.—L. C., Orangeville, Ind. It is possible that all the ailments of your cow proceed directly and indirectly from one common cause, namely, tuberculosis. You say she had twin calves arriving ten days before time, but in making this statement you probably left out of consideration that twin calves are not carried as long as a single calf, and therefore the birth cannot be called a premature one, and the other ailments becoming more conspicuous after delivery cannot be charged to that cause, especially as your statement that the cow is very thin and weak, and has been coughing for two months, but eats well and chews her cud vigorously, give a hint as to the probable existence of tuberculosis, and that the more as it is a well-known fact that in tuberculous animals the symptoms always become more conspicuous and the morbid process more severe immediately after delivery. The difficulty in passing water is probably due much more to a severe birth causing some bruising, and may be some lesions in the internal sexual organs, than to a premature birth, and very likely will soon disappear. I will not say that your cow is tuberculous, and only that I strongly suspect her to be, and, therefore, advise you to subject her to the tuberculin test. Any competent veterinarian ought to be able to apply it.

Tapeworms in Lambs.—M. A. E., Jacksonville, Pa. Your lambs have tapeworms, known as "Taenia expansa." As the host of the cystworm (larva) belonging to this tapeworm is as yet unknown no precautionary measures can be applied except to keep the lambs away from such places, pastures and sheep-ranges in which the disease the year before has made its appearance or which have been frequented by lambs and sheep having tapeworms. These tapeworms, however, can be successfully expelled provided the host, lamb or sheep is not too far gone and already beyond recovery. There are several remedies which if properly administered will expel the tapeworm of sheep. It will suffice to mention only two of them. 1. Potass. picronitric, to be given to lambs in a dose of from ten to fifteen grains, according to the age and the size of the animal, and to be administered mixed with a little flour or powdered marshmallow-root and water in the shape of pills. 2. Tartar emetic, to be given in a dose of eight to twelve grains, and administered dissolved in distilled or clean rain-water. When the worms are about to be expelled the lambs should be kept in an inclosure in which the worms can be found, because every expelled worm has numerous joints (proglottides) full of eggs, and therefore should be picked up and at once be thrown into the fire to make a further propagation an impossibility.

So-called Blackleg.—H. M. DeW., Mount Lebanon, Ky. So-called blackleg, rauschbrand, German, and charbon symptomatique, French, is an infectious and almost invariably fatal disease, which principally attacks young cattle (calves and yearlings), and is caused by a bacillus, the bacillus of blackleg. This bacillus is a faculative parasite, and, it seems, finds an entrance into the connective tissue of the animal organism, in which it does its destructive work through small sores and lesions. To give a brief or incomplete description of the disease can do no good, because it will lead to diagnostic mistakes, and to give an exhaustive description would require half a dozen pages, an amount of space that is not at my disposal. I therefore will only mention one characteristic symptom, namely, a rapid development of extensive crepitating swellings, most frequently in the upper part of a leg, near the shoulder or hip, but also in other parts of the body. The disease becomes fatal within one to three days, and as never any more than about two per cent of the number of the affected animals have recovered, no matter whether any treatment was applied or not, it can be of no use to dwell on theoretical possibilities. As to means of prevention it is different, because the disease can be prevented: 1. If young cattle are kept away from all such places in which an infection with blackleg has taken place, and in which, therefore, the blackleg bacilli must be existing. 2. If where this cannot be done the susceptible animals—the young cattle—are subjected to a protective inoculation. Concerning the latter I refer you to the FARM AND FIRESIDE of April 15th and July 15th.

So-called Splints.—H. S., Cedar Dale, Kan. The term "splint" is applied only to an enlargement (exostosis) on the inner (median) small metacarpal bone, making its appearance after the periosteum has been injured by too severe a strain upon the fibrous ligament between the large and the small metacarpal bones. Such a splint causes any lameness only, except in the beginning, immediately after the straining took place, if the morbid process extends to the knee or carpal joint, or in other words, if the enlargement extends to the joint. The enlargement below the knee on the outside of the fore leg of your horse is probably the product of a bruise sustained by the periosteum, and although an exostosis very similar in character and apt to cause lameness if extending to the joint, is not called a splint. If in both legs the lameness has disappeared a treatment is really not necessary, because the enlargement (exostosis) will gradually grow smaller if you only see to it that the horse is always shod in such a way as will make him stand square on his feet, and will effect a duly proportioned distribution of weight and concussion upon all three metacarpal bones. A contraction of the very porous exostoses can be somewhat hastened by various means, for instance by gentle pressure continuously applied, by often-repeated gentle friction, by thoroughly rubbing in once a day a small quantity of gray mercurial ointment, as much as a small pea on each exostosis. Such an exostosis will never entirely disappear, but it will gradually decrease in size until, in some cases at least, it will finally shrink to such an extent that it will cease to attract any attention, even if no treatment is applied.

Tuberculosis.—R. H. B., Long Pine, Neb. If you had made a post-mortem examination of your cow that died the diagnosis would have been very easy, but it cannot be made upon the few rather inessential symptoms you give. To comply with your request, and to give a description of the symptoms occurring in tuberculosis, even if to do so were not forbidden by want of space, would do no good, because a cow may have been tuberculous for over a year, and the symptoms as a rule are not yet sufficiently characteristic to enable any one, unless he is an expert and makes a very careful and exhaustive examination, to base upon them a reliable diagnosis, while on the other hand the very first stages may already be detected by the tuberculin test. The same is made by subcutaneously injecting into the connective tissue of the suspected animal a certain quantity of tuberculin, but before this is done the temperature of the animal must be taken several times during the last twenty-four hours, and be noted. After the injection, which, of course, must be made without unduly exciting the animal, the temperature again must be taken, say once every two hours. If then in about ten to fifteen hours a decided rise of temperature is taking place the animal is considered to be tuberculous, whereas if no marked rise of temperature can be observed the animal unless already in the last stage of the disease and nearly dying, which can easily be seen by any one, is considered free from tuberculosis. When death is already approaching no rise of temperature can be observed, simply because the vitality has burned so low that no reaction can take place. If you wish to have your cattle tested, and no competent veterinarian is conveniently near, apply to the veterinarian of your state university in Lincoln.

HELEN AND THE "CLAIM-JUMPERS"

By Hayden Carruth

IT WAS May 23, 1879, that Hugh Bennett arrived at Kampeska, in what was then the territory of Dakota, in his search for a new home. His wife and three children were with him, and the four had traveled the whole distance from their former Wisconsin home in a big canvas-covered wagon. Helen was the oldest of the children, a girl of fourteen, brown-haired, brown-eyed, and after weeks of exposure so brown-skinned that her mother called her an Indian. Helen's brother Tom, no less brown, was two or three years younger, and the baby, a little morsel of humanity who had not altogether escaped the effects of prairie wind and sun, was not much over a twelvemonth in age.

The journey had consumed more than a month, since the wagon had been loaded with household goods and a few farming implements, as was commonly the case with the "movers" of those days. Arriving at Kampeska, which was then the westernmost town in that part of the country, with half the population living in tents and covered wagons, Bennett lost no time in looking about for a desirable piece of government land. There had been a great inrush of home-seekers, and the better "claims" near at hand were already taken. He accordingly left his family at a hotel, and in company with a "locating agent" named Harkins pushed farther west. The farm which Bennett had owned in Wisconsin had been rocky and unproductive, and life so far had been a hard and cheerless struggle, so he was determined to secure good land, no matter how far he had to go. This will partially account for the fact that he finally selected a tract over sixty miles from Kampeska. It was certainly as fine a claim as any in the territory, and had the added advantage that it was within a mile or two of where a town would doubtless be established.

When Bennett returned it was with glowing reports of the homestead he had selected. His plan was instantly to start back, taking his family and belongings and enough lumber for the roof of a new house, the walls of which were to be made of sod. But the baby had been taken sick while he was gone, and the doctor said he ought not to be taken on such a journey for several days, so it was decided to wait.

The next afternoon Bennett came in plainly excited, and said to his wife:

"Harkins tells me he hears a man is going to jump my claim. Says he's going to start out tomorrow morning with a load of lumber."

"But you filed on the claim at the land-office. What can he do?" asked his wife.

"Harkins says possession is nine and a half points of the law in this country. I don't want any trouble with him out there, and I haven't time nor money to contest the matter here before the land-office. Harkins says he's unfavorably known here, and a month ago tried to jump a claim this side of mine. Harkins pointed him out to me—he's got a team of gray horses and a wagon without a cover. There's only one thing to do—get out there and take possession first."

"Go on, then," returned Mrs. Bennett. "I'll stay with baby, and come out when he's better. Take Helen with you; she can do the cooking as well as I. And Tom—take him along, too; he can't stand it to be shut up here any longer."

"All right, I'll do it," said Bennett, rising energetically. "We'll start this evening as soon's it's dark, so they won't see us. It's a three-days' drive at least ordinarily, but if we can get out ten miles to-night I believe we can make it by day after to-morrow evening."

The man hurried out, and Helen said:

"Oh, I wish I were a boy."

"Why?" asked her mother, in a curious but kindly tone.

"I could help father so much more."

"But you can help me as it is."

"Oh, Tom could help you. He ought to be the girl, and I the boy. A boy as big as I am would be so much help out in this country."

The larger stars were peeping forth as Bennett and the two children slipped out of town in the covered wagon. Helen sat in the other end of the seat from her father, anxious and watchful, and Tom between them ready to burst with excitement. So far as they could see their start attracted no attention. The night was not dark, and they made very good progress along the dim prairie road. It was almost midnight when the man said:

"There's Buffalo lake off to the left, and it'll be a good place to camp. We stopped there for noon when we went out. There's some quite dense woods around the west side, and good grass for the horses this side."

He turned down, and in a few minutes had the horses picketed. The seat was moved, and a fairly comfortable bed made for the girl. Tom was already sleeping on a pile of bedding.

"I'll just lie down with a blanket under the wagon," said Bennett, "so I'll be sure to wake up. I want to be started as soon as it's a little daylight."

It seemed to Helen that she had not been asleep ten minutes when she was awakened by her father's hand on her shoulder. There was a ruddy glow in the eastern sky.

"Helen, the horses are gone," he said, in a whisper. "I'm going to look for them."

"They can't have gone far," answered the girl. "Don't you remember that time—"

"They got loose that time," broke in her father. "The ropes are cut now. They may have been stolen, but it doesn't seem likely. I think that fellow followed us, and has driven them away so that we can't get on. I'm going round the lake to see if I can get any track of them."

Helen scrambled out, gathered some dry wood from the lake shore, and started a fire. In half an hour she had some coffee and bacon ready, and soon her father was back, but with no intelligence of the missing horses. He ate hurriedly, and again started on the search. It was now almost sunrise, and Helen woke up Tom, and together they waited. It was two hours before their father returned this time.

"I guess it's hopeless to look for them," he said. "I've been through the woods twice more, and in all directions. That man has simply led them off, and there's no telling how far he'll take them before he turns them loose. I'm afraid this settles our getting that claim, but I'm not going to give up. I'm going back to Kampeska, and hire another team. It's twelve or fifteen miles, but I can be back here by the middle of the afternoon. You just stay here with Tom, and take care of the wagon," and he walked away across the prairie.

It was still early, and for an hour or more Helen and Tom amused themselves by wandering along the shore of the lake, though scarcely a moment passed that the girl did not let her eyes sweep over the prairie in the hope that they might rest on the horses.

"I don't believe they've been turned loose," she said, "or they'd have come back before this. They've got so they think the wagon is home, and would come back to it just as they would to their own stable. I believe they're tied up over in the woods."

"Father went all through the woods," returned Tom.

"Well, he might have missed them. It was dark the first time, anyhow. Besides," she added, wisely, "mother says a man can never find anything. I'm going over to look myself," and she trudged off.

Tom was half asleep in the shade of the wagon when he was startled by hoof-beats, and opened his eyes to face Helen galloping up from the lake on one of the missing horses and leading the other.

"There!" she cried, as she sprang off. "What did I tell you? I found them over there in the thickest of the brush tied to a tree. Hurry up and harness them while I pack up things."

"What are you going to do—go back after father?"

"No! We're going on!"

"On to the claim?"

"Of course. And maybe we can get there first after all. I'll leave a note here somehow for father, and when he comes he'll follow along on horseback, and probably catch up with us."

"But s'pose he doesn't?"

"Then we'll go on alone."

"But you've never been there. You can't find the place."

"I know it's the southeast quarter of Section 15, Township 116, Range 62, and somebody'll show it to us. Besides, there's five buffalo skulls piled up on the northeast corner where our house is going to be. Hurry up while I write the letter."

In fifteen minutes they were started, the note inclosed in an empty tomato-can reared on a stick.

Out on the road they headed west, and urged the horses forward as fast as possible. It still lacked two hours of noon. There were other white-topped wagons coming from the direction of Kampeska, but gradually they were left behind. After the first excitement of the start was passed, and she had time to think over the situation, it must be confessed that Helen felt somewhat less brave. What she was undertaking began to appear more formidable. The possibility of her father not getting the note or in any way failing to overtake them did not make the outlook pleasant. The task of finding the place began to seem less easy, and the prospect of camping alone that night was far from cheering. But she felt no real temptation to turn back. She had inherited a good stock of self-reliance, and this had been cultivated in the school of adversity upon the unproductive farm which they had quitted and by the long overland journey.

At noontime they stopped at a half-completed sod house beside the trail. There was no one about, but there was a good well of water with which they made themselves free. Helen looked back longingly for the appearance of her father before starting on, but she was not rewarded. Soon after starting she sighted a wagon ahead going in the same direction. It had no cover, and the thought that it might be that of the man who was probably striving to reach the same claim that she was gave her some alarm. She knew she must not be seen closely by him, fearing that the wagon and horses would be recognized, and that further trouble would result. She came up within a half mile of the wagon, but was careful to keep that distance between.

At sunset the children's father had not come. The wagon ahead was seen to stop, apparently with the intention of going into camp. The man alighted, and as he unhitched his horses Helen saw that they were light-colored, and probably gray. This made her believe more firmly that this was the man she wished to avoid. She determined to go around, and turned across the prairie and drove directly to the north for a half mile. She was now hidden from the other wagon by the trees, and she again went west, forded a shallow stream, and just as it was becoming dark once more struck into the trail and bore straight onward. The possibility that she was ahead of the man renewed her courage, and she determined to go on as long as possible regardless of a camping-place. It was almost as late as it had been the night before when she finally turned out on the open prairie and stopped. The horses she tied securely to the wagon for the night, determined not to trust again to picket-ropes.

Tom slept well, but her own sleep was troubled, and she was up with the first touch of dawn. Before sunrise they were again pressing onward. There was still no sight of her father; nor had there been at noon when they stopped where the trail skirted a good-sized lake. A man who went by on horseback while they were there told her that they were in the northern part of Township 115, Range 60. There was a good sectional "claim-seekers'" map in the wagon, and she readily saw from this that their destination lay about fifteen miles away, and somewhat north of west. The man also said that at the crossing of Timber creek, some ten or twelve miles ahead, there was a man building a house who would give her further directions.

The stranger's information proved correct, and at the crossing Helen found the man. To his somewhat curious inquiries she replied that her father was coming, and explained that fear of "claim-jumpers" had caused her to hurry on. At the mention of this hated class the man was more than ever at her service. He went a mile west with her, where he put her on the section line, and told her that she should follow it three miles due north, which would bring her to the exact corner she wished to find.

The man's directions had been so explicit that she easily found the way. There was no road or even a track of any former wagon, but Helen kept on the section line, which was not difficult, as she could correct her bearings at every corner by the government survey stakes. In less than an hour she sighted a stake ahead and somewhat to the right, which she gleefully announced to Tom "must be it." She sprang out lightly and ran to it, and after examining it, called:

"Tom, drive straight ahead!"

The boy complied, and she stood in a tragic attitude with one foot on the stake and her arm held out at its full length to the west.

"There, Tom! Whoa!" she cried, as the rear of the wagon passed the imaginary line she was marking out. "Stop! You're on our farm. This is the southeast corner. Half a mile straight north is the northeast corner, and there's where the buffalo skulls are, and where our house is going to be. It's home, Tom!" and she came running to the wagon, her face aglow with excitement and pleasure.

"Yes, but s'pose that man is there," said the less sanguine Tom.

"Oh, don't talk that way. He's not. And if he is we're here, too, and it's our farm, and our home, and I'll tell him so. Isn't it good soil!" and she picked up a lump from the wheel-track and examined it critically.

"It does look better than any we've seen," answered the boy, beginning to catch his sister's ardor.

"Oh, ever so much," she went on, climbing nimbly into the wagon. "Crops won't fail here like they did back where we used to live. How glad father will be when he gets here and finds us." She started the horses, adding, "Now keep your eyes open for those skulls when we come around that knoll, Thomas!"

In four or five minutes Tom shouted, "There they are!" though Helen had already seen them, but had not spoken because her attention was riveted by the sight of another wagon coming from the east, and headed directly for the same place. It was without a cover, and was much the nearer to the white pile.

Tom saw the other wagon, too. "Do you s'pose it's the man?" he said, almost in a whisper, though the wagon was nearly a half mile away.

"I don't know," answered Helen, slowly, and with a little shiver. She stopped the horses and watched the other wagon. It drove straight to the skulls, turned to the north, and stopped. As it came about it was easy to see that the horses were gray.

"Yes, it's the man," she said, and Tom noticed that both hand and voice trembled. "Oh, I wonder what we can do?"

She scanned the prairie in all directions for her father or other help, but there was not another human being or habitation in sight.

"You said you would tell him that this place is ours," answered Tom.

"Yes, and it is!" she cried, vehemently. "Ours before he ever saw it. Besides, you and I were on it first. One corner is as good as another." She paused, and sat clasping her knees in her hands, the reins lying idly on the dash-board. "But what good will it do to tell him so? He knows it now as well as we do. If we went down there he might take the team away from us and drive off with it, or smash up our things, or burn the wagon, or—I don't know what! If father would only come! Why didn't I ask that man to come with us! I wish somebody would come!"

She sat rocking backward and forward, as downcast as she had been elated a few minutes before.

"What's he doing, anyhow?" said Tom, suddenly, standing up and peering ahead.

Helen also started up and looked. The man had walked a little way to the northeast, and seemed to be searching about on the ground for something.

"That must be where the corner is," said Helen. "Perhaps the stake is gone, and he's not sure that he's right."

"Hope he'll think he's wrong, and go way," returned Tom.

"Not much danger of that," answered the girl, in gloomy tones.

The man was still walking about in small circles and looking at the ground. Then he started west, stopping and looking around once in awhile. He had not seemed to pay any attention to the other wagon from the first, evidently not recognizing it. Perhaps he did not even notice it since it stood half in the shadow of the knoll and among some tall grass, and the white top had long before become a dingy dirt-color.

"Wonder what that means?" said Tom.

Helen made no reply, but stood watching him, scarcely breathing. He went on till he disappeared over a little ridge. As he passed out of sight the girl gathered up the reins and seized the whip, giving it a loud crack that started the horses at a good pace.

"He's on our farm, and he's got to get off!" she cried, her courage coming back with the disappearance of the man and the dawning in her mind of a possible way out of the difficulty.

"Are you going to drive his team off the place?" asked Tom, eagerly.

"I don't know's I've hardly got any right to touch his team, even if it is on our place," answered Helen, urging her own horses on. "But I guess we can drive down there as fast as we want to."

She cracked the whip again, and by this time the horses were trotting about as fast as they could go. They were rapidly approaching the other wagon. There was some tinware and lumber and tools and various other commodities in the Bennett wagon, and it was making a clattering which increased every moment. The land sloped downward all the way, so it was not difficult for the horses to get up a good speed even if the load was rather heavy. The next moment they broke into a gallop, and the noise increased proportionately.

"When I say yell, Tom, you just do it!" cried Helen in his ear. And the next moment she did say it, and Tom certainly did yell with the full strength of a young and vigorous pair of lungs. They were but a few rods behind the other wagon, and the noise was now something prodigious. The other horses had been for some moments pricking up their ears and moving about trying to discover what was coming. Tom's terrific whoop was the last straw. First one lunged forward, then the other, then they both got off, first at a gallop, which as quickly as possible turned into a run. Away they went down the slope to the northwest, in a few seconds being off the Bennett claim, and tearing on across the prairie.

"Whoa!" called Helen to her team, bracing her feet and tugging at the reins.

Tom turned in and helped her, but even with his assistance they, too, were well off their claim before they got the excited animals down to a reasonable gait. Helen did not stop, but swung around to return. As she did so the man appeared over the ridge, and caught sight of his team running away, the wagon swaying and jolting and making as much noise as the other had done. He started at full speed after the team. Helen drove back to the heap of skulls and stopped.

"There," she said, almost too excited to make herself intelligible, "see how he likes that! Here we are home, and we'll unload!"

She bounded out, but found that strength to carry out her plan was lacking. She sat down on one of the big white skulls, and scarcely knew whether she was going to laugh or cry. But she had strength enough remaining to direct Tom's efforts, and he began vigorously to unload the jumbled mass of things in the wagon. He was so busy at it, and Helen was so weak after the excitement, that neither saw their father until he dashed fairly around the wagon on horseback. Then if Helen did not actually faint she certainly came very near to it. But it was only for the moment, and then she told the whole story to her father, who listened more intently, perhaps, than he had ever done to anything before. Mr. Bennett then explained how he had failed to find the message in the can at first on account of the stick having fallen down, and so had lost much time in searching about the neighborhood before he started on.

And after supper, as they sat by a blazing campfire beside the five skulls, Helen, ably assisted by Tom, had to tell the whole story over again. And a week later, when her mother came, bringing the baby, of course, she, also, had to hear it, and more than once, too.

As for the man, it is not known that he ever came back—certainly the Bennetts never saw anything more of him.

QUEEN VICTORIA'S PERQUISITES

Queen Victoria has a number of queer perquisites. One is her right to every whale or sturgeon captured on the coast of the United Kingdom. This dates back to the days of the Norman kings. The whale was divided between the sovereign and his consort, the queen taking the head in order to replenish her wardrobe with the whalebone needed for the stiffening of her royal garments. Another of the queen's perquisites is a certain number of magnificent cashmere shawls, which are dispatched to her every year from the kingdom of Cashmere. They vary in value from $300 to $1,200 apiece, and the queen is accustomed to give one as a wedding present to each young girl of the aristocracy in whose future she is interested.

SEPTEMBER

We are drinking the wine of the ages
From cups that are hrimming over
With the sweet of a honey unbought with money,
Distilled from the heart of the clover.

The flowers afringe on the wayside
Are in raimeut of purple and gold;
To the rongh-hewn edge of the old stone ledge
The clinging brier-vines hold.

We are breaking life's fine elixir
In the waft of the perfnmed hreeze,
The sudden showers, the sunlit hours,
The rustle of leaves on the trees.

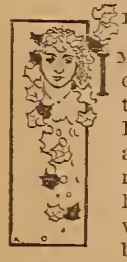
The fathomless view of the heaven,
The beauty and bloom of the day,
Are making us young—they are waking the tongue
Of the years that have passed away.

'Tis the radiant rare Septemher,
With the clusters ripe on the vine,
With scents that mingle in spicy tingle
On the hill slope's glimmering line.

And Summer's a step hehind us,
And Autumu's a thought before,
And each fleet day that we meet on the way
Is an angel at the door.

—Harper's Bazar.

JOYCE DALLAS



BY KATHERINE BAXTER

I MUST have money, hut where shall it come from? If I argue the case twice twenty times it will he all the same. How bitter to he dependent on relatives. I can no longer stand it! I must do something to earn a livelihood! I must leave this house!" Such was the desperate conclusion reached by Joyce Dallas.

Every day life had grown more tiresome to the poor girl, who had heen an inmate of her uncle's family for five years.

Her mother had left her a penniless orphan to the care of her only hrother at her death. Joyce had always felt, so far as her uncle was concerned, she was welcome, for he had spared no amount of care and love for his hright-eyed little niece; had wished her to share equally in everything with his own daughters. "Uncle Geoffrey," whose name was almost the first she had learned to lisp, had heen devoted to her mother, and true to his nohle character had cheered and comforted her lonely days of widowhood.

That mother had heen the only sister of Geoffrey Carter, and she had married against the wishes of her hrother. It was while visitiug her intimate school friend, Beatrice Glenn, that she had met Guy Dallas, a distant relative of Beatrice, aud hecome engaged to him. Dallas was handsome and noble-hearted hut poor, and Geoffrey had entertained higher hopes for his sister Maud. The first unkind words hetween hrother and sister were spoken, and they separated, Maud going away as the wife of the man of her choice. Afterward, however, when Guy Dallas succumhed to that dread disease, consumption, leaving his wife and hahy Joyce in poverty, Geoffrey had come to the rescue and there was a reconciliation. When Joyce was thirteen years of age her mother died, and Uncle Geoffrey took the unhappy little orphan into his own family.

He was rich, this Uncle Geoffrey, and while he was kindness itself his wife was a proud, arrogant woman of the world, and his daughters, Blanche and Edna, inherited their mother's disposition. Joyce had seen hut little of her Aunt Edith and her cousins before coming to live with them, hut she rememhered that they were always haughty and overhearing in their manner toward her mother, and she had rather expected the chilly treatment that she now received from them. There were three boys, Frank, Charles and haby Harry, but they were all in love with "Cousin Joyce" from the first.

Those were hard days for poor little Joyce. She kept a hright face hefore Uncle Geoffrey, and tried to make him thiuk her happy.

It did not take Mrs. Carter long to discover her husband's fondness for his sister's child, nor was she ignorant of the child's attractions. She could not help seeing the difference hetween Joyce and her own daughters, who were neither hright nor attractive, and she was according consumed with jealousy.

Uncle Geoffrey was determined his niece should share equally in everything with his girls, and this was a thoru in the flesh of his selfish wife. She deliherately set herself the task of sowiug dissension hy misrepresenting the child to her uncle.

Joyce made rapid progress under the girls' tutors, and easily eclipsed her cousins in every hranch of learning.

The Carter home was elegant, and the family entertained a great deal, whereby she had glimpses of the outside world, although she was studiously kept in the haekground as much as possible. She was scarcely ever allowed to take any part in their enjoyment. They always had something to occupy her on these occasions. Baby Harry was not well, and no person could do anything with him but Joyce, and then "she does not care to come in at all," the girls would reply to their father's repeated inquiry for her. Notwithstanding their unkindness she grew prettier and more attractive and more accomplished. While they frittered away their time in idle society chatter she was cultivating her mind.

On the few occasions she was allowed to take part in the gaities she won all hearts and became so popular with the young people who visited the honse that as she grew up she came to he cordially hated by Blanche and Edna, as well as by her aunt.

Their treatment grew, to her sensitive nature, unhearahle, making her feel keenly her dependence. Yet she was the little housekeeper, and a comfort to the hoys, who took her part against mother and sisters. Baby Harry toddled after her the day long. Her position hecame so intolerahle hy the time she was eighteeu years of age that she made up her mind to leave. She was thoroughly competent, she helieved, to fight the hattle of life single-handed, and she would make use of her talents.

She knew she would incur Uncle Geoffrey's displeasure hy leaving his house to make her living. How could she tell him his wife and daughters had driven her to take the step!

Ahout the time Joyce reached this decision there was a grand garden-party at the Mallerot mansion in the neighhorhood; a very swell affair, to which all the young people of the Carters' acquaintance were invited, as well as some from the city. The Mallerot residence was one of the most heautiful country seats on the Hudsou. Blanche was expecting to meet ou this occasion a young man whom she had met during her first season out.

He had heen very agreeahle and attentive to her during that season, and Blanche was positive that he was in love with her.

Harold Kingston was handsome, intellectual and rich, and was one of the social lions of the hour. No wonder, then, that Blanche Carter felt a thrill of triumph when he sought her out at the Mallerot garden-party and offered his arm for a promenade on the terrace.

The two daughters of the Mallerot house, pretty, amiahle girls, were busy arrauging sets, and endeavoring to make every one have a good time. Joyce for once was included in the merry party. It would never have occurred to Blanche to present Mr. Kingston to Joyce, hut Marian Mallerot, with whom the orphan cousin had heen a favorite from their first meeting, introduced the lion to her friend.

Harold was struck with her heauty of face and manner, and did not pretend to conceal his admiration.

Blanche turned hot with rage and jealousy as she watched the meeting.

"Why, Miss Carter, you have never spoken of your cousin, Miss Dallas!" Kingston said to her later. "Has she heen with you long? She is a very charming young lady, of whom you may feel justly proud."

He danced and played tennis with Joyce and showed her marked attention. He thought he had never before met a girl so thoroughly pleasing, so unaffected, so unlike the girls he had heen accustomed to meet in society.

Blanche's pleasure was dampened for that day, and vengeance hung over poor Joyce's head. Joyce felt intuitively a cloud was gathering, and almost regretted the attention of Mr. Kingston.

She politely declined all further offers to dance, or to participate in any of the numerous games on foot, and quietly slipped into the house. Her absence was soon ohserved hy Kingston and others and remarked upon to Marian, who went in search of her. Kingston expressed a desire to join in the search, much to Blanche's indignation, who could not understaud why they were all so much interested in Joyce.

In a fierce whisper to Marian she said, "The next time there is anything going on that girl will stay at home. I supposed she was sufficiently well hred to remain with the crowd."

"Indeed, Blanche," said Marian, quickly, "she will not stay at home if I can induce her to come to my house. She is the sweetest girl I have ever known, and I wish I could see more of her and know her hetter."

"Oh, she does not improve on acquaintance; perhaps if you knew her hetter you would change your mind. She is awfully disrespectful to mama and all of us." Harold was not supposed to hear this, hut he did; his quick ear caught the words, and he was shocked.

He had admired Blanche Carter; the winter he met her in New York she appeared to him a very attractive girl. He was now thoroughly disenchanted.

Joyce Dallas' fair, lovely face had at first sight imprinted itself on his heart as no other face had ever done, and he felt that he could, in those few words from Blanche, read the girl's miserahle life in their home.

The search for Joyce revealed her reading to old Grandma Mallerot. A lovely picture she made, sitting heside the old lady's couch, for grandma had been partially au iuvalid for years, and shared Marian's love for the orphan girl.

If Harold was pleased before he was douhly so now; the sensation he experienced as he looked into the girl's hright face was a new one to him. He felt a strange longiug to be her companiou, her protector.

The party hroke up with three people feeling anything hut happy. Blanche had given Joyce a partiug glance that gave her to understand what she must expect on her return. She hardly waited to get into the house before she said to her mother:

"That girl must leave; just think, Mr. Kingston has danced and played tennis with her, and she was bold enough to encourage his attention!"

Mr. Kingstou had shrewdly guessed the state of affairs in the Carter household, and with all the ardor and audacity of youth he resolved to act without delay.

The next morning Mr. Carter received the following letter:

"MR. GEOFFREY CARTER, DEAR SIR:—You will be surprised to receive this letter. I ask the honor, sir, of addressiug your niece, Miss Dallas, whom I have discovered to be necessary to my happiness. She knows nothing of this, and I do not know if she will even listen to me. But I earnestly seek your permission to win her for my wife. Your most obedient servant,

"HAROLD KINGSTON."

Uncle Geoffrey was simply amazed at this, for his wife had led him to think that it was all settled hetween Kingston and Blanche.

In his surprise he did the worst thing possihle—he took the letter to his wife to read, asking what she meant hy telling him Blanche was the chosen one.

The lady's anger was something dreadful to behold.

Mr. Carter, as well as Joyce, felt the power of her tongue. "This is our reward for our kindness to your penniless niece!" she cried. "If we had made her feel her position when she came here she would not have hecome the presumptuous thing she is. You are to hlame for it all. I wish I had never let you hring her here. Blanche has lost one of the greatest catches in New York. The idea of such a man asking the privilege of winniug this 'pauper' for his wife. And she has met him only once. She shall not stay in this house."

She did not know Joyce had made up her mind to leave hefore she met Mr. Kingston, and would uot have been there for this event in her life had she possessed money sufficient to enahle her to travel. She had answered an advertisement of a lady hving in Albany, and had heen practically engaged to take the position of companion to the advertiser, whose name was Mrs. Keunedy. How to get to Albany was the problem. She had a handsome ring, an heirloom from the Carter family, which her mother had managed, in spite of her poverty, to retain. She now made up her mind to pawn this precious keepsake, hitter as the thought was to her, that she might in that way ohtain money to reach Alhany. She knew if she asked Uncle Geoffrey for money he would want to know what it was for, and she would have to tell him everything.

So she waited until her preparations for departure were completed and then wrote her uncle the following letter:

"MY DEAR, DEAR UNCLE GEOFFREY:—It is very hard for me to tell you what I feel I must. I am going away; my life has heen made miserable, and I have heen most unjustly accused. It is hard to leave you and the hoys, hut I must, and you will know why.

"I have accepted a position with a lady in Alhany, a Mrs. Judson Kennedy, who, I hope, will give me a chance to earn a respectahle livelihood. You will find this on your return from the city, with a loving farewell. I will leave Elmwood on the five-o'clock train. Your loving niece JOYCE.

"P. S.—I forgot to say Mrs. Kennedy expects to go ahroad in Septemher and I am to accompany her. Uncle Geoffrey, please come to see me hefore that time, that I may know that you are not angry with me. And, dear uncle, won't you think kindly of Joyce when she is over the sea?'

Joyce had not seen her aunt or Blanche since their outburst over Harold Kingston's letter; they knew nothing of her arrangements to go away, and she had thought it prudent not to enlighten them. In her correspondence with Mrs. Kennedy she had named the Mallerots as reference, for old Grandma Mallerot had known the Kennedys intimately in her younger life, and Joyce had gone to the old lady for advice in the matter, pledging her to secrecy.

Now everything was settled and she was going. She had arranged with Dick, the colored boy, to smuggle her luggage to the depot for the eveniug train, and soon thereafter she was safely ensconced in the shadowy corner of a car, speeding away toward Alhany, where she arrived the next morning.

Mrs. Kennedy's carriage was at the depot, waiting for "Miss Dallas," the polite footman said, as he stepped up to her. "if you be that young lady."

Mrs. Kennedy had not felt well enough to go out that morning, but was seated in her room, awaiting the girl's arrival. It was her first experience with a companion. She had lost her daughter two years before, and since that time her life had heen so sad and lonely that she finally had determined to employ a bright young person to travel with her.

The name of Dallas happened to be a familiar one to Mrs. Kennedy and she marveled at what she deemed a strange coincidence.

"I wonder if she could he any relation to my mother's cousin's family?" she reflected. "But that is hardly probahle; there were such a lot of them, and poor. I never cared much for any of them except Guy, aud him I fairly adored, with his handsome face and cherry dispositiou. How long ago it seems since that summer when Maud Carter visited me, in our old home. And she and Guy fell in love, finally got married against her brother's wishes, and went ahroad. I believe, I have never heard of Maud after poor Guy died."

In the midst of her reverie the door was throwu open and Miss Dallas was announced. When she looked up she almost gasped at the vision that met her eyes. But quickly recoveriug herself, Mrs. Kennedy proceeded to welcome the girl.

"You must excuse me, dear," she said, kindly, "but there was something in your face that startled me strangely. You are the image of a distant cousin, of whom I had just heen thinking, but who has heen dead for years. His uame, by the way, was also Dallas. Only a coincidence, dear. You are tired, I know, and would like to go right to your room. Traveling all night is very trying. After you have had a good rest you can come down here."

Joyce was indeed glad to reach her room and to he aloue for awhile. All was so new and strange to her. She thought she would like Mrs. Kennedy, hut this was such a great, quiet house. Yet what a relief to be so far removed from the presence of Aunt Edith and Blanche. Kindly dismissing the maid, who had brought her a cup of tea, she threw herself on the bed and wept as only those who have experienced the unkindness of relatives can. Finally she fell asleep, and when she awoke it was to see Mrs. Kennedy's sweet face bending over her.

"You slept so long, dear, I feared you were not feeliug well, so I came up to look after you myself. You have had such a nice sleep and pleasant dreams, I am sure. You will have plenty of time to dress for dinner; we dine at five. When you are ready come at once to my room, as I wish you to meet my husband and nephew."

While she was dressing Joyce allowed her thoughts to revert to Harold Kingston, and she caught herself wondering if he would try to find her.

She was so busy with her thoughts the dinner-bell rang just as she finished dressing. She hastened down the hall, to find her employer and two men waiting for her at Mrs. Kennedy's door. Mr. Kennedy was one of those genial, cordial men who established friendly relations with people at the first meeting. He had keenly felt the loss of their only daughter, and his loving heart went out to Joyce at once. As he took her hand he said:

"My dear Miss Dallas, I hope you will be happy here with us old folks; it is very quiet, but we will try to enliven it sometimes with young faces."

Then the nephew, Glenn Kennedy, was presented, and all repaired to the dining-room.

Joyce already felt she would be happy with these people.

They were very chatty during dinner, Mrs. Kennedy asking her about her acquaintance with the Mallerots, who had been intimate friends of her family years ago. Joyce explained that she had lived with her uncle, ever since the death of her mother, in his magnificent home, "Elmwood," on the Hudson, adjoining the Mallerots, with whom they were all intimate.

Of course, Joyce refrained from saying anything concerning her unhappy life there. She spoke in most affectionate terms of her uncle; and then Mrs. Kennedy asked:

"What is the name of your uncle's family?"

"Carter," replied the girl.

"Carter! Why that is a very familiar name to me! I had a school friend by that name."

But Joyce had turned to hear something Glenn was saying, and the conversation drifted to other subjects.

Dinner over, the family adjourned to the drawing-room, where music was proposed. Upon the invitation of Mrs. Kennedy Joyce seated herself at the piano and astonished her new friends by her skill as a musician.

She played with a rare, soft and expressive touch, and as she passed from one composition to another her listeners became so entranced that they were oblivious of the flight of time. Then there were songs and duets by Joyce and Glenn, and bedtime came all too soon for Mrs. Kennedy, who assured Joyce that the evening had been the happiest she had spent since her daughter's death.

After retiring to her room Joyce wrote two letters, one to Uncle Geoffrey and one to Grandma Mallerot. Then she sought her couch, and was soon reveling in happy dreams, in which, it must be confessed, Harold Kingston played the most important part.

Great was Mr. Carter's surprise when he returned from the city the day after Joyce's departure to find her letter bidding him good-by. He called the household together to find out if possible what it all meant.

His wife and daughters were as much surprised as he, for it had not occurred to them that Joyce would have the courage to leave the only home she knew.

Mr. Carter seldom got ruffled, and in all their married life Mrs. Carter had only on one or two occasions seen him angry. On these occasions she had heen wise enough to keep quiet; but never had she seen anything like the terrible rage he was now in. He walked the floor for hours. His. Geoffrey Carter's, niece, his only sister's child, out in the world to earn her living, and that, too, through the unkindness of his family. His wife and daughters had conspired to bring it about. He could see it all now.

Who were these people she had gone to? And what would be the result of her being thus thrown on the world? He would go after her. She should come back, and he would see that she was properly treated. Later he remembered Harold Kingston's manly letter, and resolved that the young man, whom he knew to be the soul of honor, should have an immediate and favorable reply. The thought that people who knew him should also know his niece had been compelled to make her own living stung him to madness. She belonged to him. Maud with dying lips had given her to him, and he had, with that cold hand in his, promised she should never know a care. Blanche and Edna were terrified at their usually quiet, gentle father's outburst.

Blanche had not heard a word from Harold Kingston, except a note telling how much he had enjoyed his visit to "Elmwood."

Kingston in the meantime had eagerly watched every mail for Mr. Carter's letter, only to be disappointed. He had just about made up his mind to write again, when, walking down Broadway, he ran across Ernest Mallerot, just down from the Hudson.

From Mallerot he learned that Joyce had gone to Albany as companion to a Mrs. Kennedy.

"Kennedy!" mused Harold. "I wonder if that can be my Aunt Beatrice? I will find out."

Before Uncle Geoffrey could carry out his determination to go after Joyce he suddenly fell ill. He had not heen well for some time, and this great shock, for such it really was to him, prostrated him with a nervous affection hordering on paralysis.

His physician, anxious to arrest this, ordered perfect quiet. At his suggestion a telegram was sent to Joyce. The girl was greatly shocked and grieved, and started as soon as possible for Elmwood. Mrs. Kennedy accompanied her, giving as an excuse that she would like to spend a few days with the Mallerots.

Mr. Carter rallied and improved sufficiently to see Mrs. Kennedy before they returned. In the course of their conversation he learned, to his great surprise, that she was not only Beatrice Glenn, his sister's friend, but was Harold Kingston's aunt. When Mrs. Kennedy found Joyce was the daughter of her old-time girl friend she went into raptures and exclaimed:

"She shall be my daughter now; and she shall have my dear, dead child's fortune."

When Harold arrived in Albany and found his aunt had gone with Miss Dallas, he determined he would also go to Elmwood. The surprise to all can well be imagined when he was announced, and his intention now was to know his fate from the lips of the girl he loved.

It need only be added that there was a grand wedding in the early spring, and a trip across the ocean. Joyce Dallas did not go to Europe as companion to Mrs. Kennedy, but she went as the fair and lovely bride of Harold Kingston.

NEEDLESS FEAR OF LIGHTNING

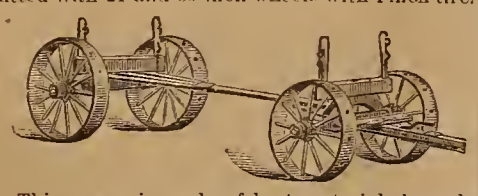
In the August "Century" Alexander McCabe gives encouragement and advice to people who have an excessive fear of being struck by lightning—or thunder, as some of them think. The keen suffering which many undergo just in advance of or during a thunder-storm is of a dual nature. The sense of impending danger alarms and terrifies; but there is also a depression of spirits, which is physical and real, brougbt about by some as yet unknown relation between the nervous system and conditions of air-pressure, humidity and purity. The suffering due to depression and partial exhaustion requires, from those who are strong, sympathy rather than ridicule. The suffering due to alarm and fright, however, is unnecessary. It is largely the work of the imagination. To a nervous nature there is something appalling in the wicked, spiteful gleam of the lightning and the crash and tumult of thunder. But such a one should remember that the flash is almost always far distant, and that thunder can do no more damage than the low notes of a church organ. Counting all the deaths from all the storms during a year, we find that the chance of being killed by lightning is less than one in one hundred thousand. The risk in the city may be said to be five times less than in the country. Dwellers in city houses may be startled by peals of thunder, but owing to the great spread of tin roofing and fair ground connections there is very little danger. In the country, if buildings are adequately protected and the momentum of the flash provided for, the occupants may feel secure. A good conductor, well-grounded, is necessary in all isolated and exposed buildings. Barns, especially when lined with green crops, should have good lightning conductors. The question is often asked, "Do trees protect?" The auswer is that the degree of protection will vary with the character of the tree and its distance from a watercourse. An oak is more liable to lightning-stroke than a beech. The character of the wood, the area of the leafage, the extent and depth of the root will determine the liability to stroke. Another question which is often asked is whether there is danger aboard a large steamship during a thunder-storm. On the contrary, there are fewer safer places. Sufficient metal with proper superficial area is interposed in the path of the lightning, and its electrical energy converted into harmless heat and rapidly dissipated. Accidents occur chiefly because the victims ignorantly place themselves in the line of greatest strain, and thus form part of the path of discharge. For this reason it is not wise to stand under trees, near flag-poles or masts, in doorways, on porches, close to fireplaces or near barns. Those who are not exposed in any of these ways may feel reasonably safe. It should be remembered, in the event of accident, that lightning does not always kill. It more often results in suspended animation than in somatic death. Therefore, in case of accident, try to restore animation, keep the body warm, and send for a physician without delay.

GLADSTONE'S FIRST REMEMBRANCE

Gladstone, in his eighty-first year, recalled, as if it had happened only the day before, an incident that befell when he was eighteen months old. Prowling about the nursery on all fours, there suddenly flashed upon him consciousness of the existence of his nurse as she towered above him. He remembered her voice and the very pattern of the frock she wore. This was his earliest recollection, his first clear consciousness of existence.

A LOW WAGON AT A LOW PRICE

In order to introduce their Low Metal Wheels with Wide Tires, the Empire Manufacturing Co., Quincy, Ill., have placed upon the market a Farmer's Handy Wagon, that is only 25 inches high, fitted with 24 and 30 inch wheels with 1-inch tire.



This wagon is made of best material throughout, and really costs but a trifle more than a set of new wheels and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill., who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

THE DUTIES OF SCHOOL DAYS

OF ALL the September sights and sounds none are more pleasing than those of the children answering the call of the school-bell. Again they are trooping past, through village and city streets and shady country lanes and roads. The sound of their voices and the sight of their happy faces seem a part of September.

At home the opening of school brings unnatural quiet, and mother often feels it a relief for so many hours from the active restlessness and ceaseless questioning of the children; but does it not also bring its extra duties and problems to be studied with care?

The responsibility of having good schools does not rest alone with the trustees and the teachers. A great deal depends on the parent. After good, competent teachers have been appointed, and the school-house and grounds made as inviting as possible, the work of the parent is only just begun. Visit the school often, and by your interest in the recitations encourage both teacher and pupil. Don't encourage the children in fault-finding, but go and see for yourself. Invite the teacher to your home, that you may make his acquaintance, and he will be better able to understand the dispositions and requirements of the children if he knows something of the parents and the home life.

Encourage the children in their studies at home. It will do you good to freshen up your own half-forgotten knowledge of history, arithmetic, algebra, etc., and it will encourage the children to see you interested in what they are learning.

Be sure that the children have suitable clothing for school. Last season's best suit is often made to do duty for this season's school-dress, although it is outgrown, too short in the skirt and too tight in waist and sleeves. I saw only the other day a little boy who had so outgrown the little velvet pants that they strained at the waist buttons and were so tight he could hardly sit down in them. A child whose clothes do not fit him suffers bodily discomfort, and is also often mortified by the remarks of his schoolmates.

A little girl came home from school crying the first day she had worn a new dress. Her mother, with the child's rapid growth in mind, had made the dress large in the waist and long in the skirt. When questioned, she sobbed, "Nannie said she guessed I wasn't at home when you fitted my dress."

The mental effects of clothing are far-reaching. There are few among grown-up people who can appear their best if they know they are not looking their best. It helps our self-respect to know we are not looking odd or dowdyish in any way. Don't let the self-respect of your little child be hurt in this way. Children are often super-sensitive to ridicule, and besides the suffering they endure they are sometimes made bashful, awkward or sullen by being forced to wear clothes which make them conspicuously different from their schoolmates.

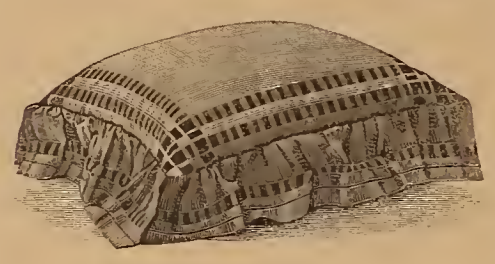
Another thing of importance of school life is the school lunch. Every successful farmer and stock-grower knows that the food given to young animals has much to do with building up healthy, strong constitutions for future usefulness. Is not this a matter of equal importance with our children? The child that has slept in a well-ventilated room, eaten a simple, nourishing breakfast, and yet comes home with his luncheon in his basket, needs looking after. Perhaps he is tired of the same thing every day. Try giving a surprise. Instead of the sandwich with a slice of cold meat for filling try a nut sandwich or fish with a little mayonnaise. All children like sweets; sometimes give a brown-sugar sandwich, or one with a filling of chopped raisins, dates or figs. Baked beans with just a touch of horse-radish, yolks of hard-boiled eggs or scrambled eggs, any of these make appetizing sandwiches. Fruit of some kind should always have a place in the school lunch, and whatever goes in the box or basket let it be just as dainty and inviting in appearance as possible.

Besides the providing of suitable clothing, the putting up of lunches, the straightening of tangled locks and washing of little hands and faces, school-days bring other duties and problems. The school life and the home life should be more closely bound together. There are often contaminating influences in a school from which we must seek by every means to guard our children. In the first place, do not send the children to school too young, before they have well-formed ideas of right and wrong. The child who has been in close companionship with his mother until he is eight or nine years old, who has formed the habit of coming to her with all his thoughts and plans, with the certainty of an appreciative, sympathetic listener, is better prepared to resist evil and more apt to choose his friends from the best children with whom he is thrown. If you keep your child's confidence, if you show your interest in his school life, its pleasures and its trials, in his school friends and associates, instead of growing away from you the bond of sympathy will be strengthened and your ability to shield and guard from evil associations materially increased. MAIDA MCL.

SAVORY SALADS

The proof of the pudding is said to be in the eating, but the proof of the salad is at least half in its appearance. Nothing is more depressing than a withered lettuce-leaf, and few things more unappetizing.

When you are going to have salad with lettuce-leaves the best way is to choose the lettuce yourself. See that the heads are round and firm, the leaves perfect on the edges and of that pale-green color which is so tempting. A good way to treat the heads



till you are ready to use them is to sprinkle them well with cold water, put them roots up in a colander or sieve, and let them stay in a room that is cold, but not freezing. When you are ready for your salad, wash each leaf separately in cold water, and dry with a cloth, taking care not to break its steam or spine. These leaves may be used as cups to hold the mayonnaise, or lobster, or chicken, or whatever you intend to have for the body of your salad, or used by themselves for a salad with French dressing.

Just now it might be well to say that a French dressing, if not mixed on the table, as so many hostesses prefer, should be kept in a cool place and not poured over the lettuce till you are ready to serve it. Oil and vinegar will soak into lettuce and make it soggy in a half hour, or even less in a warm room.

MAYONNAISE.—A good receipt is the yolk of one egg, one pint of salad-oil, one half teaspoonful of salt, two teaspoonfuls of lemon-juice and a pinch of cayenne pepper. You want your egg and oil to be very cold before you begin. If the weather is warm stand your plate in a pan of chopped ice or on a stone slab, or anything cold. A silver fork is the best implement for beating the dressing. Beat the pepper and salt into the egg, then add the oil, drop by drop, beating all the time. The secret of a successful dressing is to add the oil very slowly at first (you can scarcely do it too slowly), and then when it is well started the rest of the oil may be added more rapidly. When the egg and oil begin to thicken add the lemon-juice. Vinegar can be used instead of the lemon if you prefer. The lemon makes the dressing a paler yellow and more bland. If the oil should curdle sometimes a few drops of ice-water will smooth it out again. This receipt is for about one cupful, which can be kept for days in the ice-box. If a large quantity is required, and you are not very expert, it is best to make it twice, as this amount is as much as you can manage well at one time.

FRENCH DRESSING.—The proportions are one tablespoonful of vinegar, three tablespoonfuls of oil, one half teaspoonful of salt and one fourth of a teaspoonful of pepper. Some people prefer to have one half of the quantity of vinegar tarragon, but this is usually pretty sharp for the average palate. Blend your ingredients so well as to have neither the tastes of the oil nor vinegar. The French dressing salads are the easiest to prepare, the least expensive and the least ornamental. They are useful, however, where richer salads would be out of place.

A lettuce salad with French dressing is always nice with a fish course or at a simple home dinner. Toss the leaves lightly into a dish with a few very delicate parings of a small onion. If you wish, a cucumber sliced adds much, and an effect very pretty to the eye is obtained by slicing a couple of radishes very thin and scattering over the salad after you have poured the dressing over. In summer a few tender leaves of the dandelion added to the lettuce give a pleasant flavor; water-cress is always nice, or better yet, if you can get them, are sorrel, tarragon-leaves, parsley and chives chopped together and scattered over the lettuce.

A salad to eat with ducks is delicious made of water-cress, with a French dressing and a few slices of sour apple laid on top.

CUCUMBERS.—These made crisp by being kept in cold water for an hour or two should be peeled and laid side by side in a dish. Slice them, but hold in place as you do it, so as not to destroy their shape, add a wreath of cresses, and pour over your dressing.

STRING-BEANS.—When string-beans are boiled and cooled, then piled on a dish side by side, garnished with lettuce-leaves or strips of celery, and with a French dressing, they make an uncommon and delightful dish. All these salads may be further garnished by olives, stoned or sliced, by pinolas (olives stuffed with bits of red pepper), a few capers or radishes quartered or sliced or split down so as to look like flowers. Choose the dish you serve your salad in so that its color may harmonize with your leaves. For instance, cucumbers always look their prettiest in a dish with red or in yellow, never in blue. Exert your fancy to make your salads attractive, for there is no dish in which the individual taste can so run riot.

MAYONNAISE SALADS.—The first and simplest is of celery. To make this perfect as much care should be expended on the celery as was on the lettuce. Choose the small, compact bunches, keep them in cold water for an hour or two, then scrape off all specks from the tender stalks, wash them and cut them into dice. Pour over them the mayonnaise, garnishing the dish with some stalks cut into small strips, or lettuce-leaves or water-cress.

TOMATOES.—These make a beautiful salad. Remove the skins by plunging them into boiling water. Then cut from the top of each tomato a piece about the size of a cent. Scoop out about one tablespoonful of the inside of the tomato and fill the hole with chopped celery. On the top place one spoonful of mayonnaise, and put lettuce-leaves all around the tomatoes. Of course, you want to choose your tomatoes as nearly of a size as possible. This is a very pretty dish, particularly if arranged in a glass bowl.

POTATOES.—A very hearty salad which is always nice for a picnic or holiday jaunt is made from potatoes. Boil the potatoes in their skins; when they are cold peel them, slice them or cut them into sections like an orange plug but smaller, or dice them. Pour over the dressing, and ornament with hard-boiled eggs dropped or sliced or with the yolks pressed through a sieve.

DUTCH SALAD.—This is perhaps the most ornamental as well as the most hearty and delicious of all vegetable salads. It is often found on the tables of the Dutch, and is one of the characteristic dishes of Amsterdam. It should be arranged in a flat dish, with plenty of room for helping, and the main

body of the salad should be of celery diced or lettuce-leaves torn up finely by hand, never cut with steel. Toss your leaves or heap your celery in the center of the dish, and then around this like a wreath arrange little mounds of the following vegetables, which have previously been boiled and allowed to cool: Green peas, beets cut into small diamond-shaped bits, string-beans cut in strips an inch long, and cauliflower divided into little branches. Arrange among them as prettily as you can sprays of water-cress or small lettuce-leaves. Just before serving pour over the center your mayonnaise, having it as stiff as possible, so that it will not run among the vegetables. You can use any vegetables that are convenient. Asparagus tips are nice, or tomatoes, and if you are pressed for variety potatoes can be made to serve a turn; you ought to have at least three, however, and then alternate the mounds. Canned vegetables will do if you can freshen them by pouring over them cold water before you boil them slightly.

CAULIFLOWER SALAD.—Another very handsome and tasty dish. Choose a large fine head. Cut off the stem so that the flower will sit head up on a dish. Boil with a bit of charcoal in the water till very tender, but be sure it does not lose its shape. When cold place in a salad-bowl, surround with lettuce-leaves and add your mayonnaise among the leaves, allowing your snow-white flower to rise up among the pale green and yellow of leaves and dressing. This is a novel salad, and nice.

If for a lunch, a high tea or some such occasion during the summer or fall you wish a very pretty salad, one of torn lettuce-leaves, with mayonnaise, and surrounded with a band of nasturtiums and thin leaves and some loose flowers sprinkled among the lettuce will be found attractive. The nasturtiums impart a piquant taste. Epicures sometimes use violets in the same way, carefully stemming them. It looks beautiful, but they are not as agreeable to the taste as nasturtiums. N. M.

NOVELTIES IN FANCY-WORK

The interest in doilies still remains, and many ladies are preferring those that are all white. The one with a tatting border is a great favorite and a boon to the woman who cannot embroider. Battenberg still holds its own, and to a good needlewoman is more fascinating than embroidery.

A pretty pillow can be made of the coarse dress-linens now so much worn by drawing threads in the pillow square and tying them as illustrated, and inserting any desired color of ribbon. A border similar to this should be drawn in the ruffle.

For a cover to a satin pillow a design in arabesques can be outlined with jet beads upon coarse net, as illustrated. String the beads first, and crochet them into a braid, which can be sewed upon the design. These would be wholly ornamental. B. K.

"LEFT-OVER" CORN DISHES

Highly season one and one half cupfuls of mashed potatoes with salt and pepper, add the yolks of two eggs beaten light and three fourths of a cupful of grated cold boiled corn, and beat vigorously; lightly stir in the whites of the eggs beaten to a stiff froth; form into croquettes, roll in beaten egg and bread-crumbs, let stand fifteen minutes, and fry in hot lard. Drain on warm brown paper, and serve at once on a heated dish.

CORN FRITTERS.—Stir one cupful each of grated cold boiled corn and milk together, and season with salt and pepper; add the yolks of two eggs beaten light and five tablespoonfuls of flour, and beat vigorously; add the whites of the eggs beaten to a stiff froth and one teaspoonful of baking-powder. Bake at once on a buttered hot pancake-griddle.

CORN POTATO BALLS.—Mix one cupful of grated cold corn with one and one half cupfuls of mashed potato; season highly with salt and pepper, add the well-beaten yolks of two eggs, and form the mixture into balls. Butter a baking-pan, brush the balls with beaten white of egg, set in the pan, make a depression in the top of each, put a bit of butter in same, and brown in a quick oven. A tablespoonful of chopped parsley is a decided improvement to their flavor. Make the prepared mixture into flat cakes, and brown in a little hot fat and you have corn potato cakes. Add the stiffly beaten whites of eggs to the mixture, and bake heaped up on a buttered pan, and you have corn potato puff.

CORN OMELETS.—Season one cupful of grated cold corn with salt, pepper and a little sugar, and make a plain omelet; when ready to fold spread the prepared corn over one half, cover with the other half, and serve at once on a heated dish.

CORN DUMPLINGS.—Cut the grains of six ears of cold corn down the middle, and scrape; season with salt, pepper and a level teaspoonful of sugar; beat the yolks of two eggs very light and add to the corn with one and one half cupfuls of milk; beat well, fold in the stiffly beaten whites of the eggs, and bake. Make tea-biscuit paste of one pint of flour, roll half an inch thick, and cut into small rounds; when the corn has baked fifteen minutes arrange them over the top, return to the oven, and bake fifteen minutes longer. Serve in the dish in which they are cooked. KATHERINE B. JOHNSON.

HYGIENE AND HEALTH

WITH the heated term of weeks and months the appetite grows fretful and the system grows debilitated unless the greatest precaution is taken that foods of the right order and kinds are chosen, and that cookery of the right manner is taken in hand by one who has a thorough understanding of the culinary art, and executes as well.

Quality and not quantity is the greater demand than when cool and cold weather prevails, for the stomach cannot with kindly ways or properly care for the heavier and heat-producing articles of diet. Fruits, grains and wholesome, flaky, whole-wheat bread are ideal for even the three meals of every day, with vegetables fresh from the soil, and boiled or baked, but never fried. Make the table fresh-looking in its cool-appearing white cloth, and let it never be heavily laden with dishes and viands. Cool, pretty and tempting and lightly set with cooling drinks and delicate and cooling foods easy of digestion should be the features mainly sought.

But let us glance at the farmer's table, where fried potatoes and fried fat meat play so prominent a part during summer as well as winter. Saturated with grease in butter or fried-meat-gravy form, crisped to a pretty brown (and toothsome we must admit, and especially to the men-folk), and then sent smoking hot to the table, we place before our home-folk a dish entirely indigestible. The stomach positively cannot digest the browned, crisped particles. Potatoes thus prepared go through the alimentary canal in the same hard condition in which they entered the mouth of it, simply having irritated, though not in the least nourished. The cry against fried potatoes has been great and loud for "lo! these many years," and still they remain a commonly used article of diet because a favorite food. When shall we school ourselves to an acceptance of a diet strictly healthful, regardless of "favorite dishes," or at least to a discarding of prepared foods so prepared as to be definitely dangerous to health and life?

Tables of safe combinations of foods are obtainable—combinations that will agree with almost any stomach—and there is an assurance that fermentation and indigestion are in nowise likely to follow their use. The first and best combination is said to be milk and cereals, and that they contain the greatest nutritive value, as compared with quantity and cost. The next least expensive and valuable in nutriment would be the combination of eggs and cereals for a meal, while another would be grains and vegetables or grains and meat. Grains or cereals and fruits form another happy combination.

But we are warned that people having any manner of stomach troubles should avoid such combinations as fruit and vegetables for a meal, or milk aud vegetables, milk and nuts, or sugar, milk and vegetables.

After a perusal of such table we are sure to reflect upon the misguided knowledge of our manner of cookery for years past, for a common practice is that of serving cooked vegetables, such as potatoes, peas, beans, turnips, etc., in heated, buttered and otherwise seasoned rich milk. The mistakes that we have made and are making are many, and it is little wonder that so great ill health prevails. Reform must be the housewife's watch-word, and it is herself that must alone work the hygienic reform of and for her household. Thorough knowledge of wholesome cookery and a thorough general knowledge of proper combinations of food products should he a part of the education of every woman, the foundation of which should be laid in early childhood, and studied and practised until mastered. The world is filled with untaught, careless cooks, and the world is all too full of dyspeptics and sufferers of the nerve-unstrung order.

Wherein we further err as a class of housewives is in a misunderstanding of house ventilation and in the manner of taking and not taking the necessary bath. Houses are closed or opened as it happens, without due regard to sanitation, and much carelessness prevails through the entire departments of homes quite generally. The fastidious and thoughtful along all sanitary lines are the exception and not the rule. Beds are too little aired, too soon and early "made up." Windows are too often closed, and in cold weather especially they are all too seldom opened at all. Many who are seemingly and to all outward appearances the daintiest of housekeepers have been heard to say that all winter long no bedroom windows were opened either at night or day. They are disbelievers in "too much fresh air in sleeping-apartments," and the night long, shut in rooms of limited space, the same poisonous air is breathed over and over, laden with warmth and impurities.

"Each person is exhaling into that room about eight gallons of poisonous carbonic-acid gas and other injurious material each hour," and it is this impure, poisoned atmosphere that the sleeper inhales over and over again, each time growing in density of impurity, when shut up in a room where fresh air from the outer world cannot enter. And this is the manner of living while sleeping of thousands of people in this civilized world.

We glory in being considered "a fresh-air fiend" and "an advocate of the bath to the point of duckism." Light-weight bedding, thorough airing of beds and sleeping-apartments, an all-day, all-night inflow of sweet-smelling purity from the ozone of the dome of heaven, clean clothes and every-day ablutions of the most thorough form and kind I years ago adopted. And I believe it a subject of so great importance to all that I think it should be talked and preached from the housetop, the platform and the pulpit. Cleanliness is the surest passport to Godliness, and fresh air and water the sure journey-way thereto.

Throughout the summer let the cool sweet morning air into every corner of all the rooms, but keep the blinds closed or the

window-shades down when the sun would come pouring in and heating everything to furnace-like conditions, no matter that some one does say "let the sunshine in." Keep the rooms darkened and cool until evening hours roll around, then throw up the shades and windows, open wide the doors again, and leave them opened all through the hot, sultry nights, to make the sleeping hours quiet and restful, and the morning hours freshened for the duties to be performed.

The curtain at the west-fronted house doorway instead of the screen is an innovation worth the copying. It keeps away the flies, lets in the air and excludes the hot sunshine. When the heat of the day is past endurance the temperature of the rooms may be cooled materially if the curtain is frequently drenched with cold water. What a comfort and help this has proven to the invalid who was suffering or slowly fading away. The evaporation has lowered the temperature of the room several degrees, the moisture absorbing the heat, the dust was kept away, and thus a degree of comfort allowed to reign.

In short, how infinitely brighter, pleasanter and more comfortable may life be made where attention is intelligently given to sanitary measures and to the general principle of health and hygiene. It were well worth the while of every one to give care and thought and study to this subject of so vast importance, and to put into practice the many precepts to be gleaned from the right investigation of the topic.

ELLA HOUGHTON.

A CHAPTER ON POCKET-HANDKERCHIEFS

"I wish," observed my friend, "that some people knew the proper uses of a pocket-handkerchief."

I looked at her inquiringly.

"There is Miss Blank," she resumed, "pretty, stylish aud accomplished. She called here this afternoon, and her stay left a most unpleasant impression with me, all owing to the obtrusive manner in which she paraded her handkerchief before my eyes, and," with a little, unwilling, amused laugh, "it was not a particularly clean handkerchief, either.

"She had a cold," continued my friend, "and more than once were my words lost in the blast she blew into that soiled bit of cambric while awaiting my reply. This occurred so regularly during our conversation that toward its close I was tempted to beg her to blow first and allow me to speak afterward—to avoid repetition! She knows better? Precisely; which but makes this little dereliction all the more noticeable. I can make no excuses for her, but had she been trained from childhood to use her handkerchief properly she would not now be lacking in one of those essentials that go to make up the perfect gentlewoman."

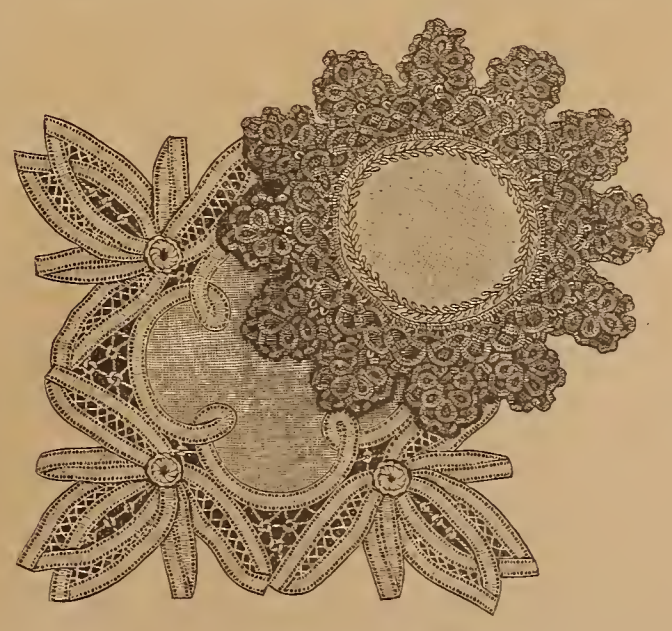
"Had she been trained from childhood." Yes, children should early be taught the proper uses of a handkerchief, and in this day of cheap handkerchiefs, and cheaper material for making the same, there can be no excuse for any mother neglectiug her duty in this matter. It is a simple problem. Any child can readily learn that, when needed, the handkerchief should be used quietly and unobtrusively, and then replaced in the pocket, and that a soiled handkerchief should never be paraded in public.

These are the two essentials that, mastered in childhood, will prevent any infringement of the canons of good taste in this seemingly simple matter—the correct usage of the pocket-handkerchief.

And above all should young girls be warned against that foolish practice known as the "handkerchief flirtation." A few years ago the country was flooded with printed directions for this pastime, and young girls in their zest for novelty practised it "just for fun," never thinking of the dangers that lay beyond. It is a wise mother who warns her child from such a course.

In olden days the pocket-handkerchief was never seen in public, but nice customs courtesy to great kings, and it made its first appearance in the time of Josephine. The Empress, though a very beautiful woman, had very poor teeth. To cover this defect she carried a small square of fine lace or embroidery which, in conversation or when smiling, she often lifted to her lips. The ladies of the court followed her example, and the handkerchief soon became an indispensable article of the toilet. These were made of cobwebby textures, costly lace or delicate pieces of embroidery, and were used chiefly for display. Previous to this date in France the handkerchief was made much larger, but it was considered indelicate to produce one in public. Nowadays the beautiful creations displayed forbid the idea that they were made to blush unseen; still, the handkerchief should never be obtruded upon public notice unless it is immaculate, in which case the owner would do well to follow the example of pretty Dolly Madison, who kept "one for blow and one for show."

The handkerchief is suggestive of the owner's personality, and often serves as an index to the same. This is quite apparent in the "bandana" of the working-man, the fancy-pictured handkerchiefs of children, and the plain, durable linen preferred by the business man. But there are other instances: the sentimental woman carries a handkerchief—a dream of beauty—that a lover well might rave over; my lady rejoices in a collection of exquisite linen or cobwebby nothings, and the up-to-date practical young woman affects plain, hemstitched linen, with this concession to femininity, however, that it be of the finest quality. The ideal handkerchief for my lady's use is of snowy cambric, crisp and fresh, having, perhaps, an embroidered initial or monogram, and exhaling just a suggestion of the owner's favorite perfume. My lady wonld consider her toilet incomplete without this



bit of showy lawn or linen which, though scarcely ever seen, and it may be severely plaiu, must be above reproach with regard to fiueness of texture.

When dueling was so greatly in vogue the handkerchief was often used as the fatal signal. One of the seconds would count "One—two—three!" and drop a handkerchief, when the pistols would be fired, or if swords were used the deadly combat would begin. Hence, probably the expression, "In the drop of a handkerchief," when doing a thing quickly was meant.

The following anecdote hails from the Orient. It is in verse, and so prettily worded that it seems a pity the writer did not choose a loftier theme for his muse. The story runs in this wise: An Eastern sultana who seems to have possessed more beauty than moral rectitude had a lover who gave her as a token of his love a kerchief of finest silk steeped in the rarest perfume. Night and day she wore it above her breast, but the perfume betrayed it.

The sultan, who was a grim old chap with no eye, or, more properly speaking, no nose for the esthetic, taxed her with wearing it, "so that the scent of it nightly disturbeth our nuptial repose," and demanded to know where she obtained it. But she rose to the occasion, and declared that "her brother, the hey," had bestowed it as a bridal gift, telling her that if she wore it constantly her husband would continue to love her. So her neck was saved, for that time at least, and let us hope that thereafter she was more discreet.

Perhaps the costliest handkerchief in the world was that exquisite piece of workmanship that was seven years in the making, and for which the Czarina of Russia paid seven thousand dollars; and without doubt the most famous handkerchief was that fatal piece of embroidery that cost poor Desdemona her life.

GENEVIEVE HAYS POWELL.

UTILIZING OLD STOCKINGS

When a lady from Philadelphia asked me if I ever made over my stockings I said, "No, madam, I do not, for I never can wear stockings patched, or, in fact, with many darns." But I have changed my mind after trying a pair of my friend's. Now I wonder how I could have been so extravagant as to discard all my stockings, for I have several pairs in my stocking-box, and I can wear them with my best boots and never feel any discomfort; in fact, they answer as well as new ones. The saving of a year's stockings in this way will surprise you. Cut off all the feet, using the best of the leg. The seam comes on top. Baste very carefully, and sew on the machine. Be careful not to draw too tightly, lest the stitches break. This is working size. BELLE KING.

GRAPES

The time is drawing near when grapes must be prepared for winter use. The forming of grape-sugar in all canned grapes prevents many a lover of this fruit enjoying it in the spring months, when of all times a tart fruit is most enjoyable. If the housekeeper will follow the following receipt she will find her grape jells and preserves as good in February and March as earlier in the season.

GRAPE JELLY.—One half gallon of stemmed grapes, two large perfect apples. Slice the apples, peeling, core and all, pnt them in the preserving-kettle with the grapes, cover with water, and cook until you can mash up smooth with a spoon. Be sure the fruit is well cooked before put into the sack to drain. Take one pint of juice to one of sugar, and boil until it drops in large thick drops from the spoon. Pour in jelly-glasses and let stand twenty-four hours. Beat the white of an egg lightly, dip tissue-paper in it, and lay smooth over the jelly. Then seal with lid.

GRAPE PRESERVES.—For preserves grapes should be used when about two thirds ripe—just as soon as the skin will slip easily. Pulp one half gallon of stemmed grapes. Peel and core two large apples, and slice thin. Place the grape-pulps and apples in a kettle with a little water, cook until they can be rubbed up smooth, and run through a colander to remove seed. Take one pint of sugar to one of the cooked pulps. Boil until it begins to jell, then add the skins. Cook all until the skins when lifted on a fork look clear. Put into cans, and seal while hot to keep from jellying.

CANNED GRAPES.—Take bunches not too large. Wash and remove all imperfect ones. Pierce the skin with a needle, being careful not to tear it, and lay in a colander enough bunches to fill one quart can. Take one pound of sugar, make syrup not too thick; dip the colander into a pot of hot water two or three times until grapes are hot, lift by the stems and place carefully into the can; pour over them the hot syrup, and seal at once. None need fear a complaint of grape-sugar if she will follow the above receipts.

H. S. MOORE.

ASKING FOR MONEY

THERE are a few phrases so almost exclusively applied to spiritual subjects, and so altogether associated with the higher life, that it seems sacrilege to use them iu reference to ordinary affairs. And yet what can be true in connection with transcendental experience if it stands not the test of common sense? All proverbs originated in every-day life. If they are strikingly expressive, if they are of universal significance, they find their way into the world's sacred literature, and fall from the lips of the greatest teachers. This, of course, enhances their value. They have received a stamp of rare excellence. If they fail to inspire it is because they become limited in their application. Why should "Ask and ye shall receive" apply only to sacred things? The truth is it was in the Sermon on the Mount, a piece of every-day common sense, a bit of popular experience uttered to lead the audience to test its higher application. It seems to me, however, tbat some persons are slow to read the application backwards. They miss much comfort and success in their worldly affairs because they think this and many other excellent precepts are too good for common use. In an article eutitled "The Mental Control of Sleep" is found the following: "The New Testament—which, among other admirable things, is a good and simple exposition of healing philosophy—gives a receipt for the cure of insomnia, and it is a better medicine than any drug; that is, 'Take no thought for the morrow.'" In the same spirit we can say that the same good book gives an excellent receipt to cure much of the grumbling and discontent in society. The persons who have not are angry at those who have the comforts and freedom which money represents. Much of this discontent could be overcome, cured or forgotten in an energetic practise of "Ask, and ye shall receive; seek, and ye shall find; kuock, and it shall be opened unto you."

But I am wandering far afield, for my intention was to discuss the delicacy some women have about asking for money. The wives and daughters who live at home, busy always, indispensable, and yet with no definite income, will tell you that they "hate to ask for money." The men of the family have money which they use sensibly or foolishly, as they please. Somewhat as the poor envy the rich out in the great unfriendly world the women envy the men in the narrower social circle of the family, where love should be the law. Far be it from me to blame women undeservedly, but where there is this reluctance to ask for money it is certainly as much their fault as the men's. It is generally conceded that men with all their good traits need a little training. One man requires to be urged to be tidy in dress; another must be gently spurred toward ceremonious manners; some need coaxing in one way, some another. No man is perfect, but the generous man deserves to be forgiven many delinquencies. "A good provider" is a homely old phrase, and one which may excite mirth in a thoughtless fortunate young woman, but nearly every one lives to value the merit it expresses. A light-hearted old maid I know says that the sweetest phrase of the marriage ceremouy is "with my worldly goods I thee endow." It sounds shocking, but after all it is only the materialistic form of "loving and cherishing," and we know that love without works is nothing. There is a great deal written about wives making themselves charming, trying to be pretty, always being cheerful, and so on, as if it would be by these efforts that their husband's love should be retained. Not often enough is urged the more excellent plan of letting the husbands make some effort to retain the love of their wives. It is human nature to love what costs us something. A husband who bestows much will love longer aud more strongly than the one who is a recipient of more than he gives. Therefore, if a woman wishes to strengthen her husband's habit of devotion let her ask, and that her joy may be full let her ask largely. There is not much danger that a wife will impose on her husband, but supposing that she should a little; I should expect better results there than in another family where the wife is too timid, too sensitive, too self-denying. A husband likes to be asked to supply his wife's wants. If at her request he frowns slightly or heaves a sigh it is not because he resents her petition, but it may be because he is not able to supply her as liberally as his heart prompts. If managed amiably the wife asking to have her purse replenished is one of the sweetest episodes of life. Of course, it is a tacit acknowledgment of man's superior power, but women have to admit that, and the wise ones do it gracefully. When one asks any favor one does so with pleasant words and preliminary compliments; so the loving wife asks for money with smile and caress, the husband rejoices to respond, and soon this practical part of life is quite free from displeasure. If the husband's accidental frown freezes the wife, if she vows "never again to ask for money," she may sulk a long while. "He ought to know what I need without my asking," she will complain to some confidential friend. But a man is not noted for intuition, and he may wonder what makes Mary so sullen, but not dream the cause. If at last he discovers the source of her bad temper he will say, with astonishment, "If she wants anything why doesn't she ask!"

In short, women must ask for money; men like to be asked properly.

The same duties may be made pleasant between fathers and daughters, between brothers and sisters. Do not throw out sarcastic remarks to the effect that you earn something certainly, as you are always busy, but you never see pay-day. Do not whine about your old-fasbioned clothes, and throw out slurs about folks that can have fine coats and smoke cigars and go off on pleasure-trips. Men will hear such talk with only a dazed feeling that you are exceedingly disagreeable. Only one of a thousand will know what ails you, and cure you by giving you a ten-dollar bill. No, our natural protectors need plain dealing. A good-natured "Say, papa, I need some money to-day, or pretty soon," will have happier results than a whole day's talk in the sarcastic, ironical line.

You see the point? "Ask, and ye shall receive." K. K.

THE PICTURE PUZZLE

It may be as old as the proverbial hills, but we played it at our Ladies' Aid social in a different manner from that I had ever seeu before, and thought as the cool evenings were approaching some other aid might like to know of it.

In the first place, in addition to the regular advertising, a committee was appointed to prepare telling, fetching notices, which were to be placed in the most "sightable" places. Large sheets of white paper were secured, and the following notices were printed in large letters upon them:

READ!
PUZZLE SOCIAL
PICTURE PUZZLE
COME COME
WHERE? PARSONAGE
WHEN? FRIDAY EVENING
PRICE? TEN CENTS
GATE GAME AND REFRESHMENTS
THROWN IN FREE GRATIS
FOR NOTHING

The wording was changed somewhat on the different bills, but the above shows what I mean. The most attractive part of these bills, however, was the parts of pictures pasted upon them wherever there was room. These slashed pictures pasted on in this manner aroused the curiosity of beholders and led them to come to the social to investigate what it all meant.

As the guests arrived they were given pieces of pictures, and at a given signal they were to start, each one moving around the room, in search of the other pieces of his picture. The first one completing his picture may be given a prize or not, as deemed best. It is not essential, as there is "a bushel of fun" without. It is an excellent manner of breaking up the stiffness that sometimes prevail even in church socials.

"But," you say, "that necessitates so much work beforehand."

Not a great deal, I reply. A half-dozen ladies can form the committee, and each one easily prepare five or six pictures, or even more. Any style of picture will be used, those from three inches in length to those a foot square—landscapes, marine views, animals, figures or faces. If they be on thin paper they must be pasted on cardboard before they are "slashed." This slashing consists merely in cutting them in any manner desired—do not have the pieces too small, as that makes it too difficult to find the different pieces after they are given out indiscriminately. The point of the game is simply this: different parts of these various pictures are handed to different individuals, and these persons are to find parts corresponding to the ones they have until a perfect picture is formed. Any one may ask another person for his piece if he sees that that especial piece will fit the one he holds in his hand.

The "gate game" is especially enjoyed by the "literati."

What gate proclaims and publishes? Promulgate.

What gate unyokes and sets free? Abjngate.

A gate of inquiring turn? Interrogate.

A gate which punishes severely? Castigate.

A gate full of wrinkles? Corrugate.

A gate which connects and classifies? Conjugate.

A gate which acts as an ambassador? Legate.

A gate which travels by water? Navigate.

A gate which makes claims? Arrogate.

A gate which increases in length? Elongate.

A gate which goes to law? Litigate.

A gate which soothes and alleviates? Mitigate.

A gate which conquers and subdues? Subjugate.

A gate which places itself under bouds? Obligate.

A gate acting as a representative? Delegate.

A gate which separates? Segregate.

A gate which cleanses and purifies? Fumigate.

A gate which sends people into exile? Relegate.

A gate which waters? Irrigate.

A gate of many colors? Variegate.

A gate which assembles? Congregate.

A gate which seeks knowledge? Investigate.

A gate which produces its kind? Propagate.

A gate which sails the sea? Frigate.

A gate of self-denial? Abnegate.

A gate which repeals laws? Abrogate.

Only the judges will have a copy of the questions with the answers attached. If you are fortunate enough to have a mimeograph in your society the work of copying the lists for the guests is reduced to a minimum. We did not try to give a copy to each one, but allowed them to choose partners and work out the list with the combined thought of the two heads. We thought this really afforded more genuine enjoyment than for each individual to have his individual list.

If you think the game too difficult as it is, a list of the words may be appended, and the guests will even then find it difficult to fit the right gate to the right question, as the words will be so misplaced, thus: Segregate, fumigate, relegate, subjugate, interrogate, corrugate, navigate, elongate, delegate, irrigate, congregate, abrogate, frigate, abnegate, adjugate, castigate, legate, arrogate, mitigate, obligate, variegate, propagate, litigate, investigate and conjugate.

ELLA BARTLETT SIMMONS.

A HANDFUL OF RECEIPTS FOR FALL PRESERVING

PICKLED WALNUTS.—When the walnuts are well grown, but still soft enough to pierce with a stout needle, gather the quantity you wish to pickle. Stab each one through several times with a big needle, then put them in a very strong brine and let them remain ten days, changing the brine every other day. After this time has elapsed drain them and set them in the sun until the nuts have turned black. Put them in jars and pour over them boiling vinegar which has in it the following spices, ginger-root, cinnamon, allspice, mace, cloves and peppercorns, of each one ounce, and let them boil in the vinegar about ten or fifteen minutes. A bit of horse-radish or a few nasturtium-seeds dropped in each jar before you cover them adds to the pungency. They are not fit for use until after Christmas.

Grapes, green or ripe, are always good, and if you can add some of the wild fox grapes the flavor of your jelly or preserves will be much more racy. Grape jelly is the very best for jelly-roll or Washingtou cake, and few people know how delicious spiced grapes are. Leaving on the skins, if your grapes are dark colored, will color your jelly. Removing them makes it a pale green.

GRAPES SPICED.—Leave on skins, mashing the grapes with a wooden spoon to break them. To seven pounds of fruit, weighed raw, add one cupful of vinegar after the grapes have been boiled and strained to remove the seeds and skins. With the vinegar add three and one half pounds of sugar and two ounces each of cloves and cinnamon-sticks tied in a cheese-cloth bag. Boil pulp, vinegar and spices together until thick like marmalade, then put in glasses. It is fine with meat.

There is a great fancy this year for all kinds of sweetmeats called conserves. They are novel and very rich, and not hard to make. Any fruit-juice may be used as a base, but the following receipt gives grapes.

GRAPE CONSERVE.—Remove the skins from your grapes, boil the pulp and strain and remove the seeds. To three pints of juice add three pounds of sugar, two pounds of raisins stoned, and boil until it becomes thick like marmalade. Just before you remove it from the fire stir in one pound of English walnuts slightly chopped, put in glasses, and seal. This is very rich, and makes a nice finish for a meal with some cake.

SPICED PLUMS are very nice, and as this is a great plum season, may be done up cheaply by the same rule as applies to grapes.

APPLE JELLY is a good method of using imperfect fruit, and is much improved, unless the apples are very tart, by the addition of some lemon-juice or the cores and parings of quinces. Cut your apples in pieces, removing any defective spots, but leaving on the peel and cores; add a little water, and boil slowly; when tender allow them to strain through cheese-cloth, but do not squeeze. To each pint of juice allow one pound of sugar and the juice of one lemon. Boil the juice a few minutes, then add the sugar, stirring until it dissolves. In about half an hour it will be ready to "set," then put in glasses.

To test jelly let a drop or two fall from the spoon. If the last drop sticks to the spoon it is sufficiently hard. In making jelly remember that the less it is stirred the clearer it will be. Also all condiments having vinegar should be cooked in agate or porcelain-lined kettles.

GRAPE CATCHUP is a good way to use sour grapes. Cook until the grapes are tender, mashing them with a spoon. Strain, and measure the pulp. To every three pints add one pound of brown sugar, one cupful of cider vinegar aud one ounce each of cinnamon, mace, allspice and cloves. These spices should be ground. Boil slowly until it is of the right consistency, and bottle, covering the corks with paraffin. This should be allowed to stand a month before using.

MAPLE-PLUMS.—If you like the flavor of maple-sugar this makes a pleasant preserve. Boil the plums, strain, and to each pint of pulp allow a pound of maple-sugar. This should be melted, and must have a little water added. Theu put in the plums and boil down until thick. S. P. M.

"SHE THAT HATH EARS TO HEAR, LET HER HEAR"

It is an old saying, and worthy of all acceptation, that grocery bills are easier to pay than doctor bills; so, likewise, should it be written of dry-goods bills.

Much of the illness only too common—colds, influenza, tonsillitis, pneumonia and even diphtheria—is due not to overdressing but to under-dressing. Many young ladies who make a most imposing appearance are really only half clad.

Of late years many sensible young women draw on wool tights over their woolens. These garments are black. They fasten at the waist with a ribbon and cling to the limbs. They may easily be removed upon going into the house, and they keep out the cold in a manner truly scientific.

But this is a somewhat expensive garment, and often the purse bespeaks an emphatic negative when necessity pleads an imperative affirmative.

To meet such cases was the bloomer invented. There is nothing nicer for cold weather than a pair of bloomers. They are easy to make and delightfully warm, especially if one is compelled to be out of doors very much. Unless you want them especially handsome you can easily utilize old dresses in this way. Gather them into a band below the knee, and wear leggings or gaiters long enough to meet them. Only one skirt will be needed with this outfit, and it may be silk, satin or moreen, whichever best suits the purse of the wearer.

Pretty yet inexpensive petticoats may be made by using black satin for the foundation and placing a series of silk ruffles around the bottom. These ruffles may be made from a worn silk dress, and may be beautified by rows of velvet ribbon, lace and occasional knots of ribbon.

Every girl should count as a part of her wardrobe several gowns of heavy flannelette or outing-cloth. They should be made full and in wrapper style and as pretty as possible, and they may be girded at the waist with ribbons or with a band of the cloth.

These gowns possess many advantages. They are warm, they do not need to be ironed—indeed, they look better if not ironed—and in case of sudden illness they might easily assume the part of a wrapper.

MARGARET M. MOORE.

OUR SUNDAY AFTERNOON

ON THE FIELD

God will give me strength to conquer,
He will give me grace to lose!
I am bound to fight his battles
In the way that he shall choose.
Beaten back and lying wounded,
With no weapon in my hand,
I am just as much his soldier
As the foremost of the band.

Dying, I still bear his colors
In this oriflamme of pain,
And the triumph of the ages
Is the triumph of the slain.
He has filled the meed of service
Who but leaves a broken sword,
And the sorrows of the vanquished
Are the glory of the Lord.

—Mary Stewart Cutting, in McClure's Magazine.

LOOK AND LISTEN

THERE was no doubt of it. The man was dead. He had been run over by the swift-rushing train; and his horse lay, a bruised and bleeding mass, there in the ditch. The most skilful surgeon in the world could not restore life to this crushed and gory frame. What was to be done next? Why, sue the railroad company, of course. Preparations were accordingly made to secure a large and exemplary sum from the corporation for the benefit of his heirs.

But in the court a few facts were brought out by indubitable testimony and through corroborative witnesses. It was shown that the railroad had been where it was for twenty years. It was made plain that the man who was killed had crossed at that point regularly every day since his childhood, and knew its time-tables and train-schedules perfectly. It was in evidence that no obstacles prevented a full view of any passing locomotive, and that the train by which the man was killed was one due at that time and not one "running wild." The people on the train and others beside the track heard the whistle when the train was approaching, and heard the bell when the crossing was about to be made. And yet the man drove on the dangerous point of the road bed apparently absorbed in some deep meditation; and he was killed.

When this point was reached, and no contradiction appeared, the judge dismissed the case. An appeal was taken, and a second followed the first. Now from the court of last resort comes the clear-cut decision of the issues involved. "It is not only the duty of railway employes to exercise due diligence and care to perform their duties with as few perils as possible to the people, but when a point of danger is known to exist it is the duty of every man who knows of such existence of peril to look and listen. If he neglect to do so his death is simply the inevitable result of his own criminal folly."

But that is an old maxim, as old as the days of Moses. Only then the maxim was applied to goving oxen rather than to rushing trains. No man lives who does not already know the peril of drink, the penalties of lust, the end of the transgressor under the operation of God's common, retributive laws. It is a terrible thing to look upon the wreck that sin has made; the bloated form, the blood-shot eye, the weakening and decrepit frame slowly sinking into the grave. But the only possible verdict must be to acquit God. The peril was not a hidden or obscure one. It was for the man to "look and listen." Had he done so he would not have fallen. Did he fail to do so his mischief has simply returned upon his own head, his iniquity has come down upon his own pate.—The Interior.

RECEIPTS FOR LONG LIVING

Fix deeply in mind the grand truth that life-power rules the body, and that it alone can cure disease.

Life-power lives upon air, water and food only; all else is hurtful.

Make cleanliness your motto, and watch against filth in both house and grounds.

Few starve for food, but many for air. Breathe deeply a hundred times daily. Wear no tight clothes. Above all, ventilate your sleeping-room.

Beware of gluttony. If the appetite is dull eat fruit only or eat nothing. Use no fiery condiments, but live chiefly on natural grains, vegetables and fruits. Never ask your stomach to chew your food—employ your teeth. Adorn your table not only with viands, but with flowers and smiles and with kindly words.

Deformity is not awardness only, but danger. A high chest will give freedom to breathing, and digestion helps to cure many diseases.

Shun stimulants and drugs as you do pestilence. For tea and coffee drink hot water, and in illness let the same magic fluid be your physic.

Thick blood causes colds and countless other diseases. Keep the lungs active by deep breathing, the skin by baths and friction, the kidney by free drafts of warm water, the bowels by correct eating, and the blood will be pure.

Spend part of each day in muscular work, part in study, and part in good deeds to men and in the worship of God.—Pennsylvania School Journal.

THOUGHTS FOR THE QUIET HOUR

He whose yesterday is full of industry and ambition, full of books and conversation and culture, will find his to-morrow full of worth, happiness and friendship.—Newell D. Hillis.

The cross of Christ is the heart of the divine system, and all who by preaching are hiding the meaning of this emblem are concealing the meaning of the gospel itself.—Manna.

Yesterday is yours no longer; to-morrow may never be yours; but to-day is yours, the living present is yours, and in the living present you may stretch forward to the things that are before.—F. W. Farrar.

'Tis an absolute and, as it were, a divine perfection for a man to know how loyally to enjoy his being. We seek other conditions, by reason we do not understand the use of our own; and go out of ourselves, because we know not how there to reside.—Montaigne.

No man ever yet asked to be, as the days pass by, more noble and sweet and pure and heavenly minded—no man ever yet prayed that the evil spirits of hatred and pride and passion and worldliness might be cast out of his soul—without his petition being granted, and granted to the letter. And with all other gifts God then gives us his own self besides. He makes us know him and love him and live in him.—F. W. Farrar.

OUR GOOD SIDE AND OUR BAD

There is a good side and a bad side to every man. We see only the good side of some man, and we wonder that he is not esteemed by all as we esteem him. We see only the bad side of another man, and we are surprised that others prize him as we cannot. We are right and we are wrong in both cases. Both men have both sides, and we ought to recognize this in our estimate of them. It is with ourselves as with our fellows; we have a good side and a bad side, and those about us are likely to judge us by the one side or the other. It will be well for us if we gain a lesson from the judgment of others as to our two sides. It ought to help us to make progress in the right direction, and to repress the faults and defects for which others judge us harshly.—Sunday-School Times.

SUFFICIENT UNTO THE DAY

In accomplishing your day's work you have simply to take a step at a time. To take that step wisely is all that you need think about. If I am climbing a mountain, to look down may make me dizzy; to look too far up may make me tired and discouraged. Take no anxious thought for the morrow. Sufficient for the day—yes, and for each hour in the day—is the toil or the trial thereof. There is not a child of God in this world who is strong enough to stand the strain of to-day's duties and all the load of to-morrow's anxieties piled up on top of them. Paul himself would have broken down if he had attempted the experiment. We have a perfect right to ask our Heavenly Father for strength equal to the day; but we have no right to ask him for one extra ounce of strength for anything beyond it. When the morrow comes, grace will come with it sufficient for its tasks or for its troubles.—Theodore L. Cuyler.

HOUSE-BUILDING FOR HEALTH

That part of the foundation which is seen—the underpinning—should have liberal spaces left for cellar windows, for a dark cellar lends itself to much insalubrious concealment of decaying vegetables, and promotes the growth of molds and other low organisms inimical to health. In planning the cellar make it deep enough to accommodate a tall furnace, if that is to be the source of heat, and treat it to a good coat of lime whitewash. Our grandmother knew that "liming" the cellar made it delightfully sweet-smelling, but it remained for modern science to demonstrate that lime is one of the most effectual of microbe-killers. A coat of plastering applied to a wire lathing overhead will be an additional barrier to bad odors and a great hindrance to a fire originating in the cellar. To prevent the ground about the house from being saturated with moisture from the roofs, thoroughly constructed gutters should be provided.

We now reach what women generally consider the house. Many people imagine that very high ceilings are vitally essential to pure air. A radical mistake. Frequently changed air in a small room is better than motionless air in an apartment as high as a church-steeple. In the Waterlow-Allen improved dwellings in London none of the rooms were over eight feet high; but by intelligently placing windows so that a perfect cross-ventilation could be had by opening them when needed, and by open fireplaces in every room, a salubrious condition was achieved that made the death rate among the toiling artisans of a crowded metropolis less than in rural England. The salubriousness depends less on the actual number of feet of cubic space than on those measures that shall insure a frequent change of air, and as the draft in the chimney must take out a certain amount of vitiated air, that which is fresh will come in through spaces around windows and doors, and even through walls. A simple board about four inches wide fitted and placed under the lower sash will direct a constant current of fresh air upward, and is a capital method of ventilating.

"HUSTLERS" AND "BUSTLERS"

"He's a regular hustler, eh?" said the man in the street-car to an acquaintance.

"He thinks he is," was the laughing reply; "but he is only a bustler."

However ignorant the dictionary may be in regard to the modern meaning of the word, the business world has accepted "the hustler," and we all know the man—wide-awake, energetic, capable, swift to plan, and prompt to execute. What he undertakes is pushed to completion with all the skill and dispatch at his command.

But the world holds many who are only bustlers—keeping a constant commotion about them, but doing nothing. They rush here and there, take hold of this and that, are always in a whirl of excitement over some enterprise, but they never accomplish anything. They fancy themselves the most busy and industrious of people, when in reality their energy is expending itself in mere bustle.

It is worth while, in the midst of our pursuits and enthusiasms, to make sure to which class we belong—whether we are wasting our strength uselessly, or whether we have some clearly defined object in view, and are pressing toward it with well-directed effort.

SUGAR AND SUNSHINE

Bay City, Michigan, has one of the largest beet-sugar factories in the United States, and the best one this side of Germany.

It is a wonderful process, this sugar-making, from the ripening and planting of the seed, the culture of beets, digging the vegetables and their manipulation in the factory, to the two spoonfuls of the beautifully granulated sugar which you put in your coffee on Sunday morning.

To think that this sour old world has sugar in her heart! And it tickles our farmers since they have found it out.

Sugar-makers and beet-growers have also found this out: If the vegetables are dug during a protracted spell of cloudy weather, then the beets yield a comparatively small per cent of saccharine matter. If, however, they are gathered when the days are all sunshine, then is the output of sugar very largely increased.

Take a lesson, my friend, from a homely thing—a sugar-beet. Dwell continually in the blessed sunshine of God's righteousness. Then will the little children delight in your presence, and the world shall know that you have been with Jesus.—Charles H. Dorris.

UNSELFISHNESS

I love my neighbor as myself;
I love his horse, his house, his pelf;
His pelf, I should have said before,
Means his arzhong, his Lewis door.

I love my neighbor, oh, so well,
That with my nose I'd have him smell;
With my own eyes I'd have him see,
And with my mind think thoughts like me.

I love him so, his ways I'd fix
In trade, religion, politics;
His thonghts, his deeds, his aims, in fine,
I'd shape to harmonize with mine.

Ah, would he let me love him so,
How smoothly all our plans would go;
In everything beneath the sun
I and my neighbor would be one.

But ofttimes, when I sit with him
And note his humor, sweet or grim,
With disappointed heart I see
My neighbor is in love with me.

—Robert J. Burdette.

"Oh, hear the owl," said he. "'Who! Who!'"
Said she, "It sounds more like 'woo.'"
"Oh, yes," he cried, "that's very true,
But really now I wonder who—"
Just here the owl replied, "You two!"
The young man promptly took the cue.
Now, wouldn't you?

SHE WANTED TO PLEASE

HERE is an amusing story at the expense of a lovely and gifted lady who some time ago was on the staff of a paper devoted to society items. Every week her copy went to the editor beautifully written and faultless, considered as copy from a printer's point of view; but any little suggestion she wanted to make she ran along with the article in the following fashion:

"Mr. and Mrs. Brown-Smyth gave on Monday an elegant dinner of fourteen covers. (For goodness' sake, spell her name 'Smy'—last week it went in 'Smi,' and she was fearfully cross about it.) Mrs. Indigo Blueblood has sent out cards for a ball, at which she will introduce into society her lovely daughter. (This is all right. This Mrs. Bluehlood has some sense, and doesn't in the least mind seeing her name in print. It's the other Mrs. Blueblood we had the fuss with.) Mrs. De Porkins contemplates a visit to Paris early in the spring. (Don't stick her down at the tail-end of the column, whatever you do. I want to please her somehow, because last week she went in as one of the many 'others.')"

The editor was away, and the sub was so very busy he hadn't time to read the proof of this, and it went in the paper in full, exactly as she had written it.

THE SAYINGS OF LITTLE SAMMY SMITH

Humor is things a feller says to you when you're feelin' like laughin'.

Pa says he changed his name when he got married; it was Smith, and now it's Smithereens.

Ma is threatened with nervous prostration. Pa says she's got the kind that affects everybody else's nerves but hers.

Of course, I don't know as that had anything to do with it, but Kittie Biggs tells more lies than ever since she's got her false teeth.

Pa says women are like fountain-pens; they work till they drop, and make us poor fellers scratch till they get ready to do it again.

Pa was defeated for alderman this spring. Ma said 'twas 'cause he didn't put his heart in the fight, but pa said that wasn't it—'twas his leg.

"Man is as the grass," the preacher said, and I asked pa what it meant. He said it referred to ma's folks and such, 'cause they come up in the spring and stay all summer.

Old Mister Grumpy came down to our house the other day and sat in our new chair, and pretty soon he begun to kind o' smile and look real pleasant. Pa reached for his cane and I went out and got a brick, but there wasn't no cause for alarm. Ma had left her camera on the table and it was pointed right at the old man; that's all.—Judge.

POINTED PARAGRAPHS

An important foot-note—"Please use the mat."

Things are apt to look rather blew after a cyclone.

The only covering of the river's bed is a sheet of water.

As an extra precaution every cooking-school should be run in connection with an eating-school.

A coquette always has more fools than wise men on her string.

The lender frequently finds that borrowing dulls the edge of memory.

A time-honored paper is a promissory note that is not duly protested.

Some men are so lacking in hospitality that they won't even entertain an idea.

The road to fame is crowded with men who have become discouraged and turned back.

HIS FIRST WEDDING

"Mood gorning, meutlegen!" politely but peculiarly saluted a pale, worried-looking young man, who was passing the tavern at Pettyville. "Dice nay."

"Good gracions!" ejaculated a recently arrived guest, who was standing on the porch with the landlord. "What is the matter with that gentleman, to cause him to talk in such a strange manner?"

"That's the new minister," replied the landlord. "Last night he officiated at his first wedding, the marriage of Miss Hitchcraft and Mr. Hotchkiss, and bein' considerably nervous and agitated, he got so badly tangled in tryin' to repeat the names of the bride and groom that at the conclusion of the ceremony he stammered out an inquiry if cussing was kistomary, and then tried to cover his confusion by announcin' that the usual collection would be taken up. His tongue and nerves 'pear to be still twisted this mornin', but I s'pose he'll get over it after awhile."—Judge.

A GEORGIA MARK TAPLEY

John Johnson happened to the accident of having his left leg cut off, but he was fully insured, and will now have enough money to go into business on his own account. We congratulate you, John.

The editor has been laid up for a week past, but we are glad to say that he is out again—$50 or $60.

The weather is so hot that we can cook our meals in the sunshine. This is a great saving of fire-wood, and shows that the Lord will provide.

A hurricane struck us the other day and moved our office into the next county just in time to save us the trouble of paying house-rent.—Whitsett (Ga.) News.

OPEN HOUSE

"Come and dine with us to-morrow," said the old fellow who had made his money and wanted to push his way into society.

"Sorry," replied the elegant man, "I can't. I'm going to see 'Hamlet.'"

"That's all right," said the hospitable old gentleman, "bring him with you."—London Tid-bits.

A WAY OUT OF IT

Mrs. Gabb—"Now you must come and see me this week sure. Come Thursday; I will look for you then."

Mrs. Gadd—"Well, I'll try to; but it may rain Thursday, you know."

Mrs. Gabb—"Well, if it rains Thursday you must come Wednesday."

MAN FOR THE EMERGENCY

"Ain't we got a cut of Kruger?" asked the foreman.

"We ain't," replied the editor of the "Plunkville Bugle," "but that picture of the man who was cured of liver complaint by Jobson's Liver Bitters is enough like him to go. You'll find it in the far corner of the wood-box."

ONLY NATURAL

Beth had been accustomed to only the little patch of blue over her city home. On being taken to the country, and seeing the sky completely covered with clouds, she exclaimed, with much surprise, "Why, the sky gets tanned in the country, too, doesn't it, mama?"—Judge.

NEW HEAD ANATOMY

Beth had never before seen a woman wearing a high back-comb. "Goodness, mama!" she exclaimed, with wide-open eyes. "that woman's head bas a finger-nail!"—Judge.

BIBLICAL

"After man came woman."—Cambridge Chronicle.

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SELECTIONS

THE DATE-LINE

A MAP-MAKER asked the "Sun" if the date-line, or the imaginary line drawn to mark the change in the calendar day required of circumnavigators of the globe, follows the 180th meridian. He adds that he has been unable to find the date-line on any map.

The date-line does not follow the 180th or any other meridian for its entire course, but takes a somewhat devious route through the Pacific. It is strange that it is shown on so very few maps of the world. The reasons why a crooked course was given to it and why it was placed in the Pacific are interesting and easily understood.

Suppose the date-line had been run through our country on the meridian of Chicago. In that case, when it was Monday in New York, Cleveland and Indianapolis, it would be Tuesday all the way from Chicago to San Francisco and out on the Pacific. Of course, that would be a serious business inconvenience. It is evident that the date-line should not pass through any continents. It is practically a necessity that such a line had to be fixed somewhere, but it obviously had to run through an ocean.

It should not pass through the Atlantic ocean, because, in that case, when it was Monday in London, Paris, and Hamburg, it would be Tuesday in the United States, and this would be inconvenient in regions that have such enormous interests in common, and are so closely united by telegraphs and cables. The best place for the date-line was in the Pacific ocean. If we follow the line through the Pacific we shall observe that the ideas above expressed have had due weight in marking its course.

Passing through the middle of Behring strait, the line suddenly turns to the southwest till it reaches 170 degrees east longitude. In this way Behring island and the entire Aleutian chain, all a part of North America, are kept on the American side of the line. When it is Monday in New York, it is also Monday in Attu, our most western American possession.

Then the line sweeps eastward again and follows the 180th meridian far south until it reaches the neighborhood of the Fiji islands. As this group and other islands round about belong to Great Britian, and are closely united in business relations with New Zealand and Australia, the line takes a wide sweep to the east, so as to give them all the same calendar day. It then returns to the 180th meridian, which it follows to the Antarctic.

The annexation of the Philippines, which lie sixty degrees beyond the 180th meridian going west, makes it incumbent on all Americans to know everything about the date-line.—New York Sun.

HOW SHE BROUGHT JOHN TO THE POINT

"Oh, Mamie," said the blonde girl to the brunette, "I've got a piece of news. John Davis proposed to Julia Smith last night, and of course she said yes, and they are to be married in September, and—"

"Yes, I've heard it all; everybody in the neighborhood knows all about it," interrupted the brunette. "And what's more, I know exactly how she managed it. Oh, she's a sly one, is Julia."

"Tandem, moonlight, etc., I s'pose," said the blonde girl.

"Nothing of the sort," said the brunette. "Her scheme was really quite ingenious and original. It was like this: John, you know, is a queer sort of a chap. He is athletic himself, and he despises the woman who hasn't the figure of a washerwoman and the strength of a circus acrobat. He talks about the physical degeneracy of the American woman, rails at corsets and all that sort of thing, and swears he'll never marry a girl who hasn't the constitution like a Philippine woman or some other kind of savage. Of course, he doesn't say all this point-blank to the girls themselves, but he's always hinting at it, and when he's with the boys he talks right out plain. Of course, Julia hears all this from her brother Sam. She's got a beautiful figure, Julia has, I must admit that. But she doesn't go in for golf, and she isn't devoted to the wheel. She's the other sort—distinctly feminine, you know, and all that sort of thing. She doesn't like short skirts or mannish shirt-waists and collars, and sticks to clinging draperies and such things. So, of course, John, though he likes Julia quite a little, falls into the idea that she's a soft, feminine, useless sort of a creature, without any strength, and nothing but a society butterfly.

"Well, Julia sizes up the situation and makes up her mind to open John's eyes. Her mother, you know, is a splendid housekeeper and one of those practical women who believe in girls knowing how to do things about a house. Consequently, Julia knows how to do all sorts of things—wash and iron and cook and all the rest. So one night Julia leads on the unsuspecting John until he is riding his hobby good and strong. Then she gets him to admit that because she does not go into athletics of all kinds he thinks she's a gilded butterfly, or words to that effect. Then she up and offers to bet him that she'll do the family washing the next Monday, and do it in style. He can't back out, and she wagers a theater-party against a box of gloves. Of course, John himself is to be the judge—that's the game.

"Well, John shows up Monday morning, and finds Julia well along with the washing; in fact, she's just ready to hang out the first of the clothes. And maybe she wasn't got up for his benefit! She had on a blueprint gown, and looked as neat as a pin. Just think of the possibilities—sleeves rolled up to the elbow over round, white arms; clinging skirts that revealed unsuspected charms over the wash-board; dainty attitudes as she stooped over the clothes-basket, and stood on tiptoe to reach the clothes-line; glimpses of slender ankles, etc. Humph! No wonder he proposed that very night."—Chicago Inter-Ocean.

HOW ELECTRICITY KILLS ANIMALS

In the sessions of the Society of Physics and Natural History of Geneva, on March 2d, Professor Prevost and Dr. Bateili presented a report of experiments made to determine the mechanism (mechanics) of death by electricity. They say that all animals subjected to currents of high tension—twenty-five hundred volts, for instance—die from their effects upon the nervous system and chiefly by the arrest of respiration. But the heart continues to beat; its contractions are strong. The animal may then be saved by applying artificial respiration. If a low-tension current is employed—say forty volts—the phenomena are different. The nervous system is but slightly affected and the animal continues to breath, but the heart ceases to beat. Its movements are irregular and it does not force the blood into the vessels. The heart of the dog and of the Indian pig never recovers its action: these animals die of paralysis of the heart; they fade away without sign of pain. No method of restoring them has been discovered. Rabbits and rats, however, do not die under a weak current; their hearts, stopped for a moment, resume their beats when the current is taken off, and they seem to be as well as before the experiment. The most curious result obtained is that the pulsation of the heart of a dog, stopped by a low-tension current, can be re-established by passing a high-tension current through the animal. The paralyzed heart resumes its pulsations and the animal may be revived by artificial respiration.

DRESSING A WOUND

Did you ever notice the way a physician prepares the court-plaster for a wound? First fold the piece lengthwise directly through the middle. The plaster should be considerably larger than the wound, to keep well over the edges. Then slash the plaster lengthwise nearly to the edge. Straighten the court-plaster out flat and cut the slashed pieces at opposite ends. Place the straight edges of the court-plaster to the flesh on either side of the wound, bringing the strips across the wound. Moisten them, and taking a strip from each side, draw them together gently, closing the cut, and stick the plaster in place. Continue with all the strips, and the cut will be dressed in a manner to insure a perfect healing and as well as any doctor could do it.—St. Louis Post-Dispatch.

WHAT IS A SLEEPER?

Here is a definition which is as difficult to read rapidly as "Peter Piper picked a peck of pickled peppers," and yet is more sensible. In fact, it is an actual statement of facts, as you will find if you read it slowly.

A sleeper is one who sleeps. A sleeper is that in which a sleeper sleeps. A sleeper is that on which the sleeper runs while the sleeper sleeps. Therefore, while the sleeper sleeps in the sleeper the sleeper carries the sleeper over the sleeper under the sleeper until the sleeper which carries the sleeper jumps the sleeper and wakes the sleeper in the sleeper by striking the sleeper under the sleeper on the sleeper, and there is no longer any sleeper sleeping in the sleeper on the sleeper.—Leader.